The Beaver

WINTER 1968

NONSUCH

Decorative touches are added to the little ship modelled after the original *Nonsuch* in a Devonshire shipyard. Here, looking towards the stern, is the entrance to the cabin, adorned with fine carvings, as is the sternboard on the poop where the tiller handle is prominent, while the carved hound on the ship's rail rests above a row of belaying pins.

The Beaver

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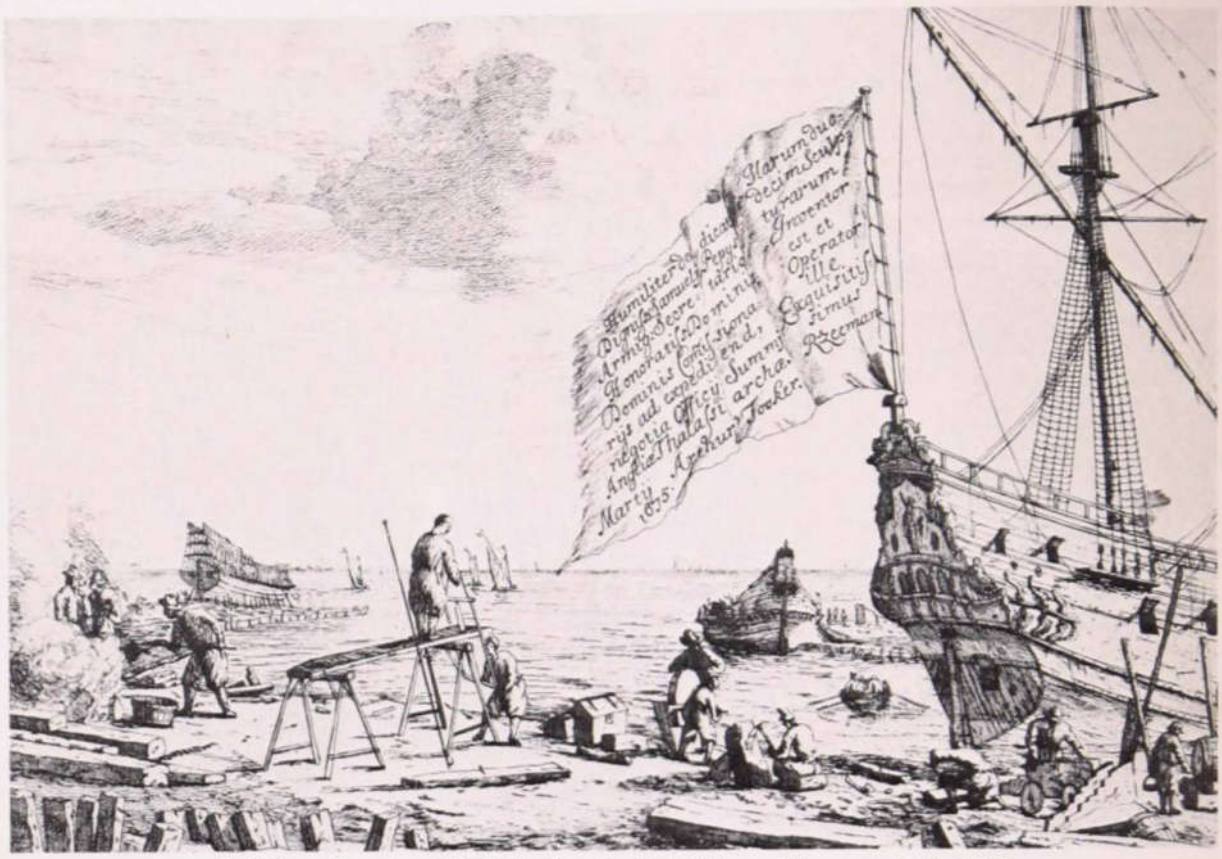


BY COURTESY OF THE DIRECTOR, SCIENCE MUSEUM, SOUTH KENSINGTON, LONDON

Building ships about 1650, the time the first "Nonsuch" was probably built.

THE NONSUCH KETCH

BY PHIL DAY

The author is a journalist with an English west-country daily who has a hereditary interest in Devon ships. Most of the photos were taken for the H B C by Littlejohns of Bideford.

THE LONDON GAZETTE in 1669 recorded: "Deal, Octob. 11. This last night came in here the *Nonsuch Ketch*, which having endeavoured to make out a passage by the North-West, was in those seas environed with Ice, which opposing her progress, the men were forced to hale her on shoar and to provide against the ensueing cold of a long Winter; which ending they returned with a considerable quantity of Beaver, which made them some recompence for their cold confinement."

Just seventy-one words, but behind them lay a story of enterprise, endeavour and courage finally resulting in the granting of a charter by Charles II on 2 May 1670 to the Governor and Company of Adventurers of England trading into Hudson's Bay—and with it the incorporation of the Hudson's Bay Company as it is known today.

Now, as part of the Company's celebrations in 1970 of its three hundredth anniversary of incorporation, the *Nonsuch* is to sail again. In a turning back of the clock three centuries, an accurate replica of the small vessel which blazed that first exciting trail has been specially constructed in the shipyard of Messrs J. Hinks and Son, of Appledore, Devon, a part of England already steeped in shipbuilding history and exploits. Eventually she will be transported overland to Winnipeg—once Fort Garry, and the North American headquarters of the Company—where she will be placed on permanent exhibition in the Manitoba Museum of Man and Nature.

The story of that first voyage of the *Nonsuch* is one befitting any book of fiction: how else could one describe the romantic story of two Frenchmen emigrating to Canada, realizing the enormous potentialities of this new country, and coming back to Europe to visit the court of King Charles to get the financial backing they needed to launch their dream expedition to establish firm trading ties with the Red Indians?

But it was no fictional occurrence: it all really happened and the result was that a new world of commerce was opened up in the vast reaches of Canada.

The story really started in the late 1650s when the two Frenchmen concerned, Médard Chouart, Sieur des Groseilliers, and his brother in law, Pierre Esprit Radisson, were actively engaged in the fur trade. We are told, however, that they received nothing but discouragement from the authorities in New France and in France itself, and an increasingly disgruntled Groseilliers and Radisson, after seeking the advice of a Colonel George Cartwright, then on a commission in Boston, Massachusetts, New England, travelled to England in 1665.

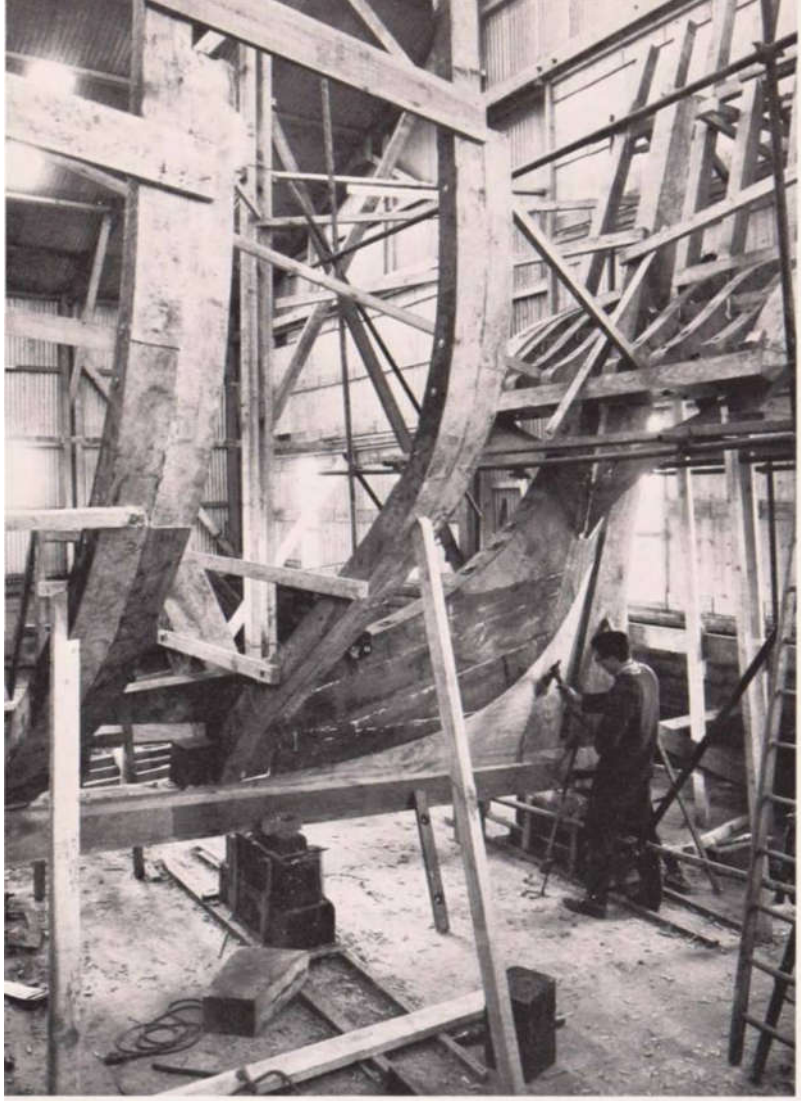
It is a matter of history now that after various setbacks, sufficient support was found for their dream project among the courtiers and financiers of England and plans were in fact made for two ketches, the *Nonsuch* and another called the *Eaglet*, lent by the king from the Navy, to set forth. On them were to go the two Frenchmen—Groseilliers (later to be referred to in the records as Mr Gooseberry) with the *Nonsuch*, and Radisson with the *Eaglet*.

Unfortunately the *Eaglet*, damaged in a storm, had to put about and return to Plymouth, leaving the *Nonsuch* to sail on alone.

It is this great voyage of discovery which has provided the Hudson's Bay Company with the basis of its 300th anniversary celebrations and in keeping with the importance of the occasion, a really tremendous amount of study and research went into the building of the new *Nonsuch*. Detailed plans and specifications were prepared by a Falmouth (Cornwall) naval architect, Mr Rodney Warington Smyth, with the help and advice of the National Maritime Museum at Greenwich, and immense care has been taken so that the re-construction is as authentic as possible.

The scene in Hinks' shipyard at Appledore as the *Nonsuch* was gradually re-born was one which must have been seen regularly in the shipbuilding yards of centuries ago. There was no place here for the modern use of plywoods and laminated woods: this was a job calling for the traditional English oak and elm, and indeed most of the wood which was used in the construction could well have found itself forming part of a ship going not towards Canada but in the opposite direction. It was planned at one time that a replica of the *Endeavour*, the vessel in which Captain Cook made his discovery of Australia, should be built at nearby Bideford to form part of anniversary celebrations, but these plans fell through because of lack of finance and so the timber which had been specially earmarked for the *Endeavour* was secured by Messrs Hinks for the *Nonsuch* instead.

Building a ketch in October 1967, the 37-foot keel and stern assembly of the replica "Nonsuch" in Hinks's Appledore shipyard.



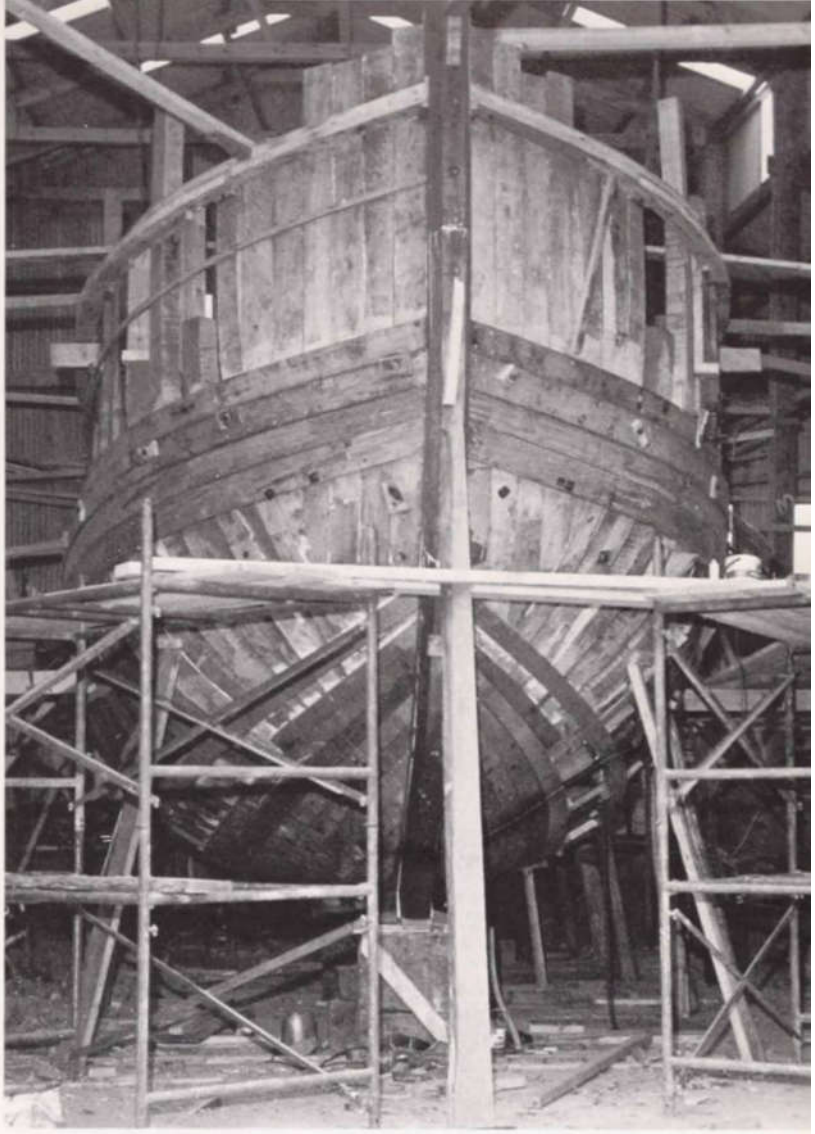
With the main double frames erected, shipwright at the stern assembly trims rabbett with an adze. Full length view (above) a month later shows completed framing.

An apprentice using the trunnel mute, with finished trunnels or treenails in the background.

In the introduction to the specifications it was stressed that the builders would be expected to enter into the spirit of the planned reconstruction and "to appreciate fully that the vessel is intended to be a museum piece". From what I have seen, the building of the ship could not have been in better hands: the men at the yards entered quickly into the spirit required and it was clear that they were thrilled by the storybook associations of the first *Nonsuch* whose image they were creating.

The very nature of the authenticity required necessitated the use to some extent of the tools of the 17th century—tools like the adze and the trunnel mute, a kind of round spokeshave for which the Maritime Museum provided a pattern so that one could be specially made, and the pane maul, a spoked hammer used to drive home the trunnels. Trunnels? These, for the uninitiated, were the oak pegs (treenails) made from wood sawn at least 15 years ago and used to secure the planking to the vessel's frame. They were wedged on the inside and caulked on the outside in keeping with the style of 300 years ago.

Fore end of vessel shows framing, lower planking and thick strakes or wales (right).



A trunnel is driven into the lower planking, its inner end is wedged, and the shipwright then saws off the inside end of the trunnel flush with the ceiling.

Making the sails in a Portsmouth sail loft from specially woven flax canvas.

The outward appearance, indeed, is one befitting the emphasis on "the maximum possible authenticity," even to the manufacture and fitting of the sails which will send the *Nonsuch* scudding along the seaboards of the New World. For this phase of the work, expert help was enlisted from the Lucas Sail Loft in Portsmouth whose workers fully maintained the same spirit of historical accuracy which was woven into the ship from the day her keel was laid.

No modern fabrics of synthetic fibre dared to be seen in this sail production—nor brass eyelets, machine stitching or wire. Instead it was best quality Navy flax canvas woven in Scotland, ranging in weight from 15 ounces for the main topgallant sail, the mizzen topsail and the jib to 24 ounces for the mainsail and the fore staysail. And instead of reef points, with short pieces of rope attached to secure that part of the sail reefed or taken in, the mainsail and staysails have been given bonnets—an extra detachable foot to the sails which was unlaced and stowed away when the order to shorten sail went out. Special research even went into the ropework employed.

More specialist help was called in to provide the ship's carvings which are liberally besprinkled about the *Nonsuch*. "A mermaid with raised arms and tail terminating in decorative foliage" is one typical specification for a phase of the work which has beautified the *Nonsuch* to no inconsiderable degree. Instructions called for the carving of lion masks, a lifesize crouching dog, and female figures, and a magnificent stern decorated with two Amorini amid foliage.

Even below decks the accuracy theme has been continued with the captain's cabin and mate's cabin furnished and decorated in the style of the period.

It has been an amazing reconstruction, particularly since no actual records of the first *Nonsuch* are in existence apart from her leading dimensions. What is known is that the *Nonsuch* was purchased by the adventurers the March before she sailed for the sum of £290 from a Sir William Warren.

Although there is no documentary proof, it is highly likely that she was the vessel of the same name sold by the Navy just five months earlier—a supposition supported by the fact that the said Sir William is known as being a favourite merchant of the Navy Board who dealt in "masts, deals and Norway stores."

If she was the Navy's *Nonsuch*, then the records show that she had already had a fair share of excitement even before her noted voyage. The ketch was built in 1650 by a Mr Page at Wivenhoe, Essex, bought for the Commonwealth Navy four years later and captured by Ostenders in 1658. But she was not to be their property for long:

the very next year she was recaptured and she was listed as one of the ships of the Royal Navy at the time of the Restoration of King Charles II in 1660. She was sold in November 1667—and who could have foreseen that this 17-year-old vessel would be playing so quick and important a part in Canadian history?

It is easy, even for the less romantic among us, to visualize the scene as the *Nonsuch* made ready for sea in the weeks preparatory to her sailing from the Thames at London early in June 1668, in company with her sister ship, the *Eaglet*.

In the Hudson's Bay Company's first Grand Ledger there is the recorded payment of £5 to Mr Isaac Marychurch on 8 June 1668, for "pilotting the Eaglet and Nonsuch ketches out the River". According to Captain Gillam it was June 3rd when they weighed anchor at Gravesend.

No journal or account book kept on the voyage, as laid down in the sailing instructions, or during the first winter spent there, has survived in the Hudson's Bay archives and so for information on the actual voyage the researcher has to rely on material from other sources. For the same reason one cannot be certain about the actual outfitting of the *Nonsuch* for the trip, for in many cases the entries in the Grand Ledger refer also to the *Eaglet*. But there is still a wealth of information to be gleaned by the curious, and certainly it is interesting to find out the kind of equipment and the like which went into the planning of such an expedition in those far-off days.

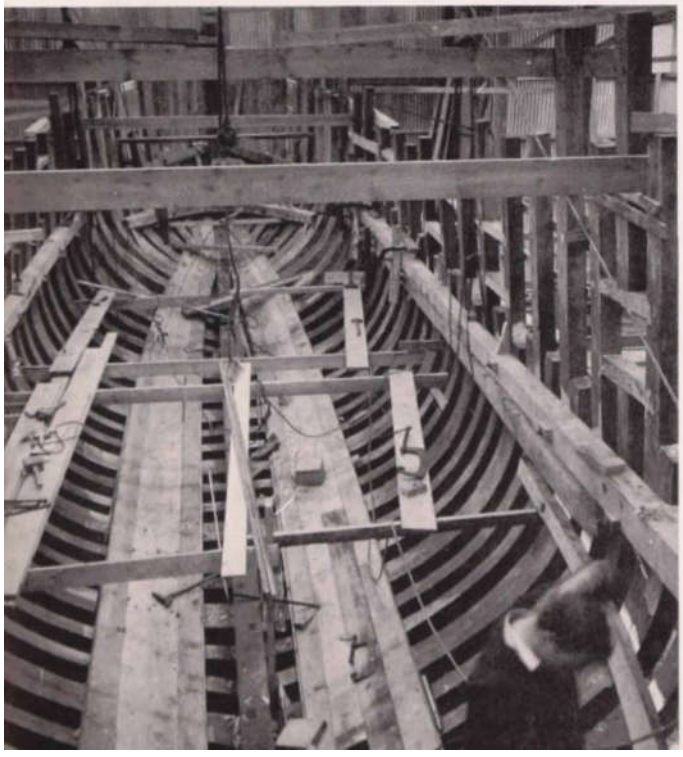
There were bills for anchors and other ironwork, for cable, cordage, pitch and tar, for sails, for compasses, colours and ships lanterns, for axes, saws, hammers and other tools, and for blunderbusses, muskets, pistols, for powder and for shot. There were also bills for items like "shirts, hose, mittens and other slopsellers wares" and for four dozen plain shoes at 27 shillings a dozen. The food stores were well stocked too it seems: the records show that for 134 cwt of beef and pork for the *Eaglet* and the *Nonsuch* a Mr Richard Whitepaine was paid £147 15s. 0d., which worked out at £1-2s. per cwt plus 7s. charges. On board too went biscuits and flour, pease and oatmeal, raisins, prunes, sugar and spice, oil and vinegar, and eight gallons and one quart of lemon juice. Room in the holds was also found for malt, for beer, brandy and tobacco and also into the accounts went bills for six eel nets and for 56 pounds of cork, for paper, quills and ink, and for a trumpet.

One Grand Ledger entry records: "For sails and other things for the *Nonsuch*, paid Mr. William Joyce £50 on 30 March 1668."

The *Nonsuch* carried a French surgeon, Pierre Romieux (Peter Romulus) and the Ledger not only records payment of £21 to a Mr Morecock for medicines on 5 August but also the payment of £2 for a bed for Pierre—an indication, perhaps, that he was thought worthy of some special consideration.

It was not all hard work and no play getting ready for the voyage: tucked away in the Ledger records is the payment of £5-5-6 for a dinner at the Sun tavern, incurred while the two vessels were being fitted out.

One of the most interesting items listed as going on board the two vessels was that of "wampumpeage." Wampum, the standard currency of the early fur trade adopted from the Indians consisted of small marine shell beads best obtained from the New England coast and widely used as a medium of exchange. A supply had been brought back to England by the far-seeing Groseil-



Interior, looking forward, showing lower ceiling being formed, also deck beam shelf and beam clamp and (below) the final plank, known as the 'shooter', being driven into position.

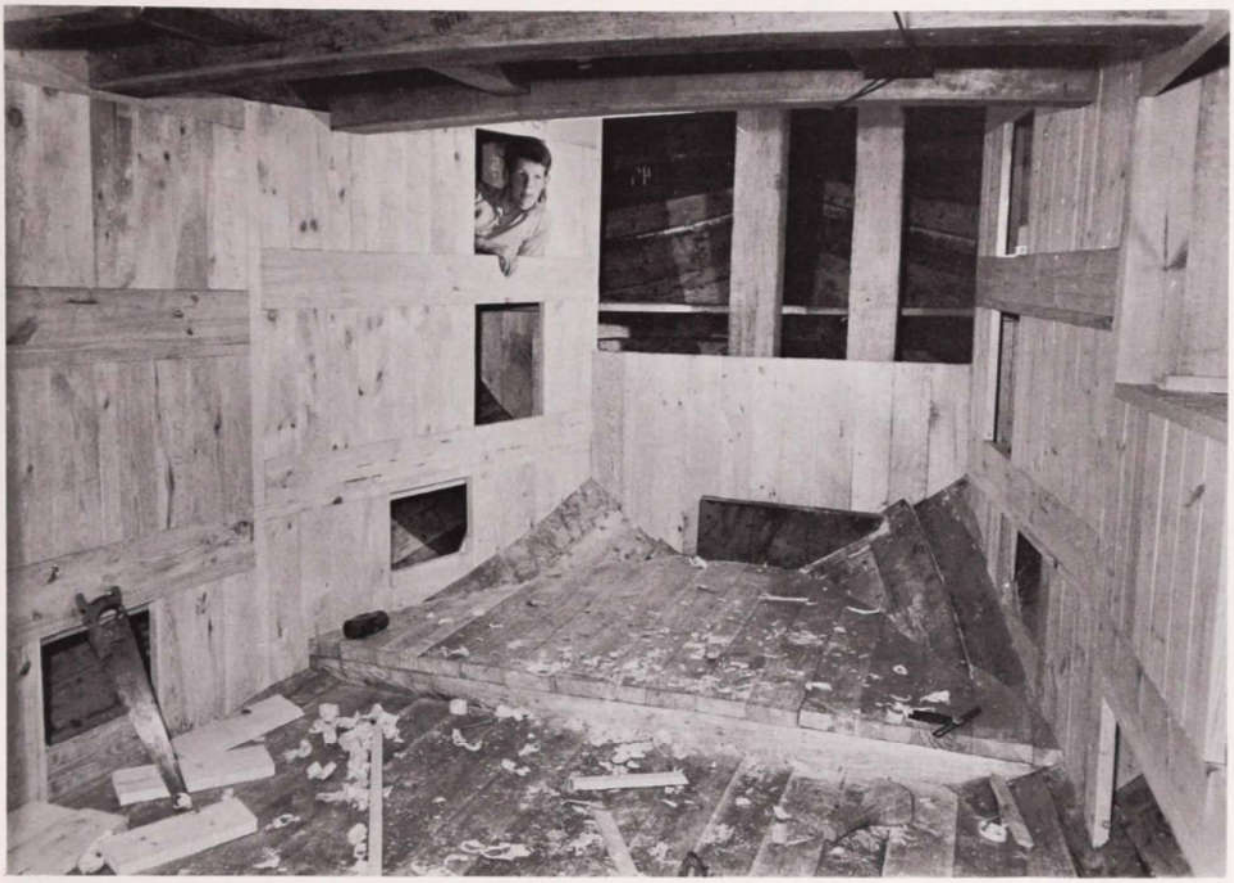
liers and Radisson and the sailing instructions declared: "You are to take notice that the wampumpeage wch you carry with you is part of our Joynt Cargo wee having bought it for our money of Mr Gooseberry and Mr Radisson and is to be delivered by small quantityes with like Caution as the other goods."

Obviously great care was to be taken of this item and just how important the two Frenchmen were in the eyes of the backers is revealed in the instructions which laid down that the pair were to be treated "with all manner of Civility and Courtesy and to take care that all your Company doe beare a perticular respect Unto them they being the persons Upon whose Credit we have Undertaken this expedition".

All in all, it must have required a fair amount of capital investment to get the project under way. It is not known exactly how many men were on board the *Nonsuch* when she sailed West for the only accounts in the Grand Ledger list just four men receiving wages for the voyage—Zachariah Gillam, captain; Thomas Shepard, chief mate; James Tottenham (Tatnam), mate; and Peter Romulus (Pierre Romieux), surgeon. But references are made to "ye seamen" and there is some indication of the total

Hanging knees have been fitted to main deck beams in the hold where a shipwright is trimming off trunnels.

Looking aft, showing poop deck beams fitted over the stern cabin and shipwright laying main deck.



The fo'c's'le, looking forward, with an apprentice in one of the seamen's bunks.

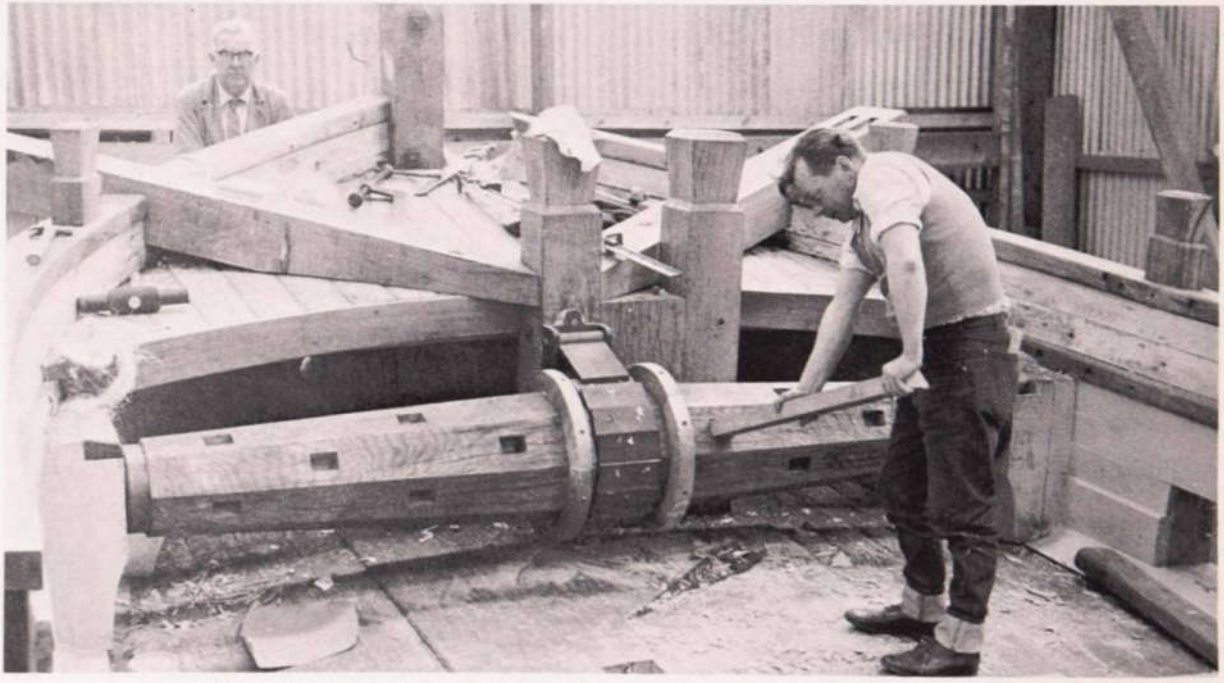
crew in that the *Nonsuch* in her Navy days carried 12 men in peace, 24 men in war abroad, and 35 men in war at home—although just where they all lived on board such a small craft is not known! But what is known is that on 22 May 1668 a total of £229-0-4 was paid to the crews of the *Eaglet* and *Nonsuch* at Gravesend, a figure almost certainly made up of varying sums paid out as advance wages. On the return of the *Nonsuch* to London an additional £535-5-11 was paid out in wages to Captain Gillam and his ship's company, but again there was no record of how many men were concerned.

Even to such experienced seafarers as these men, there must have been a tremendously high degree of excitement as the *Nonsuch* and the *Eaglet* slipped their moorings in London River and set off on a voyage which every man must have realized could well be a hazardous one.

The sailing instructions to Captain William Stannard, commander of the *Eaglet*, and to Captain Zachariah Gillam, commander of the *Nonsuch*, were explicit enough. The document concerned, which is in the possession of the Public Record Office in London, started: "You are with the first wind that presents to saile with the s^{d} Vessells Unto Hudsons Bay either by the Northward or Westward according to your owne discretion endeavouring to Keepe Company as much as you can and in order there Unto you are to appointe your Places of Rendezvous in case of Separation."

The instructions were certainly detailed. At Hudson Bay Stannard and Gillam were to "endeavour to bring yo^{r} said Vessells into some safe Harbour in ord^{r} to trade with the Indyans there" and to be cautious with their dealings. There should be no more than fifty pounds worth of trade goods at a time out of each ship and "when they returne on board with such goods as they shall have in exchange from the Natives you stowe the same on board the Vessells before you deliver out any more. . . ."

Serving long splice are Joe and Oswald Bennett, riggers who came out of retirement. Later to wind ropes into rigging they used ancient 'rigging screws' equipment about 125 years old.



A shipwright 'testing' the windlass. The man in the background is caulking seams.

J. Hammett (right) once retired, directs the caulkers who caulk hull seams with oakum, a practice now obsolete.

Shipwright fitting the wooden hoop bands on the mainmast, which is nearly eighty feet long.

But first they had to try and ensure their personal safety upon this foreign shore. "You are Upon yo^{r} first arrivall there to raise some fortifications upon the shore for your more convenient Accomodation and safety in the prepaireing whereof both your shipps Companies are to give their mutuall assistance and you are allwaies to have extraordinary Care of your Vessells to prevent any Surprise" said the orders.

Already the planners were anticipating success. The instructions laid down the procedure to be adopted "As soone as you have gotten togeather of the Comodityes of the Country to any Considerable Value": they were to be put on board the *Nonsuch*, with Captain Stannard taking command, and with as many extra crew from the *Eaglet* as was thought convenient he was to sail for home bringing Mr Gooseberry with him. He was also to bring back to England some copper or other minerals. And there was a reminder of the kind of weather which might have to be faced: they were advised to make "what hast you can in the dispatch of the said Vessell that so it may be out of the Streights before the Ice doth hinder."

Those left behind with the *Eaglet* were to continue to trade with the Indians and collect what goods they could in readiness for the next journey home.

Making even more fascinating reading, perhaps, was the instruction to the two captains to have in their thoughts "the discovery of the Passage into the South sea and to attempt it as occasion shall offer with the advice and direction of Mr Gooseberry and Mr Raddison."

It seems there was information that it was but "seven daies padling or sailing" from their trading base to an area known as the Stinking Lake—just why is not specified—and that it was not above another seven days more to the strait leading into the South Sea and from this point "but forty or fifty leagues to the Sea it Selfe."

The idea was to gather as much information as possible before the planned return of the *Nonsuch* so that consideration could be given to sending a vessel on a special voyage of discovery.

What if things did not quite work out as expected? At this stage no one could have foreseen the stroke of misfortune which caused the damaged *Eaglet* to turn back: thoughts were directed rather on what the position might be if plans did not materialize as far as business on the other side of the Atlantic was concerned.

If, for instance, no ships arrived from England by the end of August 1669, then Captain Gillam should use his discretion, with the advice of Mr Raddison, in deciding to return home or stay longer—or even to sail away after

having first left those behind who might be willing to stay "to provide trade ag[t] the next return of the Shipps".

"If, however, they could not find the right places to trade and thought that considerable discoveries were unlikely, then the *Nonsuch* was to return to England right away, having first put all her cargo and provisions that could be spared on board the *Eaglet* and in turn taken aboard such men as could leave "to save our charges". For her part, the *Eaglet* was to sail to Newfoundland to sell such provisions as were available and then go to New Jersey or New York for the further disposal of her cargo and to pick up a return load."

Obviously the backers had their sights firmly fixed on as large a return for their investment as possible. It was realized, of course, that a few private adventurers might also be carried on board the two vessels and this the backers did not refuse to allow. But they did "absolutely restraine all persons from tradeing themselves with the Indians because thereby our Trade may be distroyed and the said Mr Gooseberry and Mr Raddison loose theire credit with the Indians wherefore it is Our Order that all such Private adventurers be disposed of in like manner as our owne goods are wherein wee doubt not but the adventures will find their gaine sufficient."

Another intriguing order was this: "Wee doe also declare that if by accident you meete with any Sea Horse or Mors teeth or make any advantage by Killing of Whales It is to be made good to our accompt."

It is a matter of history now that, the misfortune to the *Eaglet* apart, everything worked out admirably—and the way was paved for the formation of the Hudson's Bay Company.

It was nearly four months after leaving England that the *Nonsuch* had her first contact with the Indians. Captain Gillam's Journal records that on September 22nd, 1668, they saw "Smoak on the main, where firing a Gun, *Indians* came off, with whom we had some small Commerce, and departed; . . . ."

His Journal went on: "The 29th we came to the River on the East side, which the *Indians* told us of, and found at the Mouth of it 8 foot Water, and getting in, met and touch'd on a Ridge of Stones in two places; but getting farther in, anchor'd in 2 fathom and a half fresh Water: The River is a Mile broad, and lieth in E. by S."

Gillam and his companions named the river the Rupert River after Prince Rupert, one of the Adventurers who sponsored the voyage. Following their instructions, they carried their provisions ashore and built a house of upright logs, caulked with moss, and they named it Charles Fort, in honour of the King. Here they spent the winter of 1668-69.

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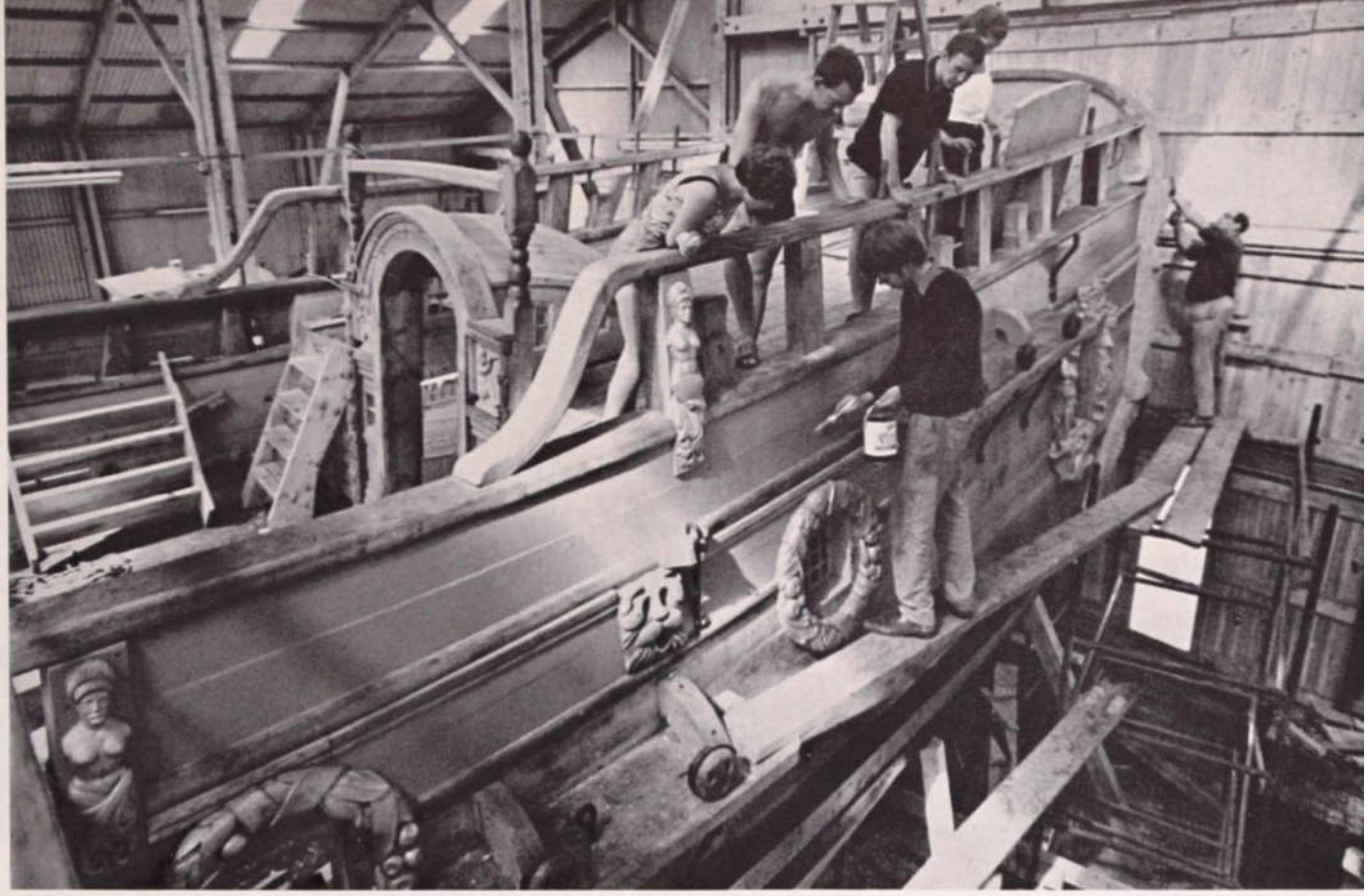


WIDE WORLD PHOTO

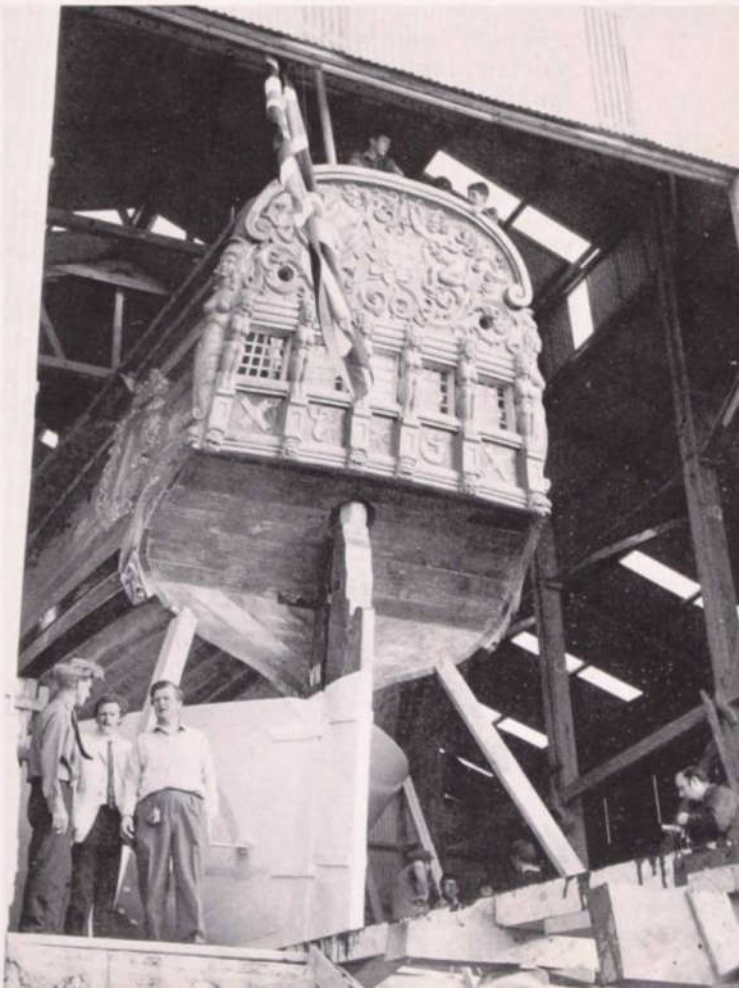
Left: Jack Whitehead (top at left in workshop, and below on ship) and his assistant Norman Gashes of the Isle of Wight work on the wood-carvings. In sailors' lore, an unclothed woman would quell a storm.

Visitors watch painter and carver at work on hull. Below: Ready to leave the shed for her launching when the props are removed, the ornate carved stern and leaded windows of the aft cabin of the "Nonsuch."

Gillam's Journal only has a few particulars more. "*October* the first, with a Flood, we went a Mile above a high Point on the South side, found it still rocky.... *December* the ninth, being frozen up, we went on the Ice to a small Island, lying in the middle of the River, full of poplar Wood, (which we wonder'd at) the whole Country being full of Spruce... *April* 1669, the cold weather almost over, the *Indians* began to resort to us." Gillam later stated that they traded with 300 Indians, who would be the peaceful Cree of James Bay. "*June*, calm and hot weather, we began to work on our Vessel, and sent our Boat to sound the River, who found it flowed eight Foot Water, and now only wait for Wind and Tide to carry us down the River and over the shoals."

But this plan was not to work out. Once clear of the river they encountered ice and had to turn back so their departure for home was delayed until August.

By October 1669 it was all over. The *Nonsuch* had arrived back safely in England with her cargo of furs, and husbands, fathers, sons and sweethearts had been rejoined with their loved ones. The financial backers were delighted—and the way was wide open for a tremendous range of trade.



Bottle of champagne swings towards the bow as Mrs L. Heathcoat Amory names and launches "Nonsuch" on 26 August 1968 and after an anxious pause the ship enters the water. With Mrs Amory are Viscount Amory, Governor of the H B C, Mr A. L. Hinks, and Mr R. Warington Smyth. Once afloat, mizzen mast is stepped, and mainmast and maintop are lowered into position.

Now, 300 years later, those early exciting days have been recaptured, at least in part, with the building of a new *Nonsuch* at the Appledore yards of Messrs Hinks, a long-established family business now in the fourth generation. The selection of such a small yard—there is a labour force of only 18, including apprentices—for such an order of international reputation is in fact in keeping with the impressive adherence to authenticity which runs like a vein through all the Hudson's Bay Company's celebrations plans, for it is almost certainly in a similarly small English boatbuilding yard that the keel of the first, never-to-be-forgotten *Nonsuch* was laid.

That keel, like the one which has been fitted to its re-creation, was of sound English narrow leaf elm. It went into place in the Appledore yard in October 1967, the first step in a building process which saw the magnificent, completed hull slide gracefully down the slipway into the waters of the River Torridge on a late August evening of 1968 to present a picture which will be etched indelibly in the memories of the thousands of people who were there.

It was a proud moment not only for the representatives of Hudson's Bay Company who were present—among them the Governor, Viscount Amory (whose aunt, Mrs L. Heathcoat Amory, named the vessel) and the Secretary, Mr R. A. Reynolds—but also, of course, for the builders.

Their minds must have gone back to the days of last winter when the new *Nonsuch* was taking her first steps towards fulfilment: to the grey days of December when the framing was completed and to March when the planking was finished, and then on to April when the decks were fitted amid the spreading magic of a piece of history being re-born.

What was really amazing was the tremendous number of people who came to look at the ship taking shape—not only local people, but holiday visitors to the area and those who had made special journeys, sometimes over quite long distances, to see what was being done. The world, of course, was already aware through newspaper and radio and television reports of the existence of this new ship—and it seemed as though a lot of the world had gone to Appledore to see for itself!

A look at the visitors' books was most illuminating. They contained the signatures not only of British people, but also of visitors from France, Switzerland, Norway,

Austria, Belgium, Ireland, Sweden, Holland, Germany, Canada—and even a Persian. And the comments were heart-warming from people whose imaginations had obviously been stirred by what they had seen. There were the expected remarks like Good Luck, Bon Voyage—but there were also comments like "a wonderful achievement." "magnificent," "fantastic" and "fantabulous". "Thank God we still have craftsmen" said one visitor; another wrote: "A great tribute to Appledore and its seafaring traditions." In one extremely neat but childlike hand was the message, quite simply: "The best ship I have ever seen." With thought to the future, another visitor had written: "Don't waste her in a museum."

Without fail visitors have been impressed with the authencity surrounding this vessel's construction—authencity which went even as far as ensuring that the *Nonsuch* displayed the right colours as her stern slid from the launching shed into the sea for the first time. She has been given a white bottom with black wales and varnished up to the gunport moulding: from the moulding to the top of the rail she has been coloured a medium dark blue—a blue which is in fact the product of three different tones blended to match the exact shade laid down by the experts after examination of old prints and other records. Inside her bulwarks she has been painted red and below decks the timbers have been left their natural colour.

After the launching, with her acting master, 39-year-old Mr Adrian Small, from Brixham in Devon, on board, the *Nonsuch* was towed upriver to where she was to have her masts stepped, her six specially made two-and-half-pounder guns installed, and her final fitting-out completed. After her acceptance trials she will be on show in London and other ports—and then it will be Canada and land-ho for the Company's tercentenary celebrations.◆

Discommoded by the Cold

BY A. BURNETT LOWE

ANTONIO GALVAO, writing in the year 1563, tells the story of the voyage of Sebastian Cabot to Canada. He describes the journey across the Atlantic until finally the coast of Labrador was reached. "And there," says Galvao, "they found great cold by which they were discommoded."

I imagine that the rigours of this Canadian climate of ours must indeed often have given pause to the early visitors to our shores. Coming as they did from the relatively balmy climes of western Europe they must often have had second thoughts about their wisdom in leaving the Old Land as the blizzards and arctic cold descended upon them.

Consider, for example, Martin Frobisher. He and his mariners set sail from England in the spring of 1578 with intent to find a Northwest Passage which would take them to the riches of the Orient. They made their way across the Atlantic, along the coast of Labrador and into Hudson Strait. And then this entry appears in the journal of this third voyage of Frobisher by George Best, who was a participant (in modernized spelling):

> In this storm being the six and twentieth of July, there fell so much snow, with such bitter cold air, that we could not scarce see one another for the same, nor open our eyes to handle our ropes and sails, the snow being above half a foot deep upon the hatches of our ship, which did so wet through our poor mariners clothes, that he that had five or six shift of apparel, had scarce one dry thread to his back, which kind of wet the coldness, together with the over-labouring of the poor men amidst the ice, bred no small sickness amongst the fleet, which somewhat discouraged some of the poor men, who had not experience of the like before, every man persuading himself that the winter there must needs be extreme, where there be found so unseasonable a summer.

A few years later Captain John Davis, sailing by Labrador, found it necessary to take means to sustain his men in the bitter weather. "The weather so thick and cold," he says, "the allowance of victuall was increased to one half pound of bread and one can of beere to breakfast."

Captain Thomas James was certainly discommoded by the cold in 1631 when his ship *Henrietta Maria* was caught by fast-forming ice in the bay which now bears his name. He and his men decided to abandon ship and make their winter habitation on the nearby shore. On one of his voyages from ship to shore through the icy water, Captain James says: "we greeted our Fellows the best we could; at which time they could not know us, nor we them by our Habits nor Voices, so frozen all over we were, Faces, Hair, and Apparel." And then a day or so later: "The 30th [of October] betimes in the Morning, I caused the Chirurgeon to cut the Hair of my Head short, and to shave away all the Hair of my Face, for that it was become intolerable, and that it would be frozen so great with Icesickles." Here are two comments from his journal during the winter which followed. In December: "The 7th day was so extreamly Cold, that our Noses, Cheeks, and Hands, did freeze as white as Paper" and by the 23rd, "Upon divers, the Cold had raised Blisters as big as Wall-Nuts." In February: "It [the cold] would be sometimes so extream, that it was not indurable; no Cloathes were proof against it; no motion could resist it. It would, moreover, so freeze the Hair on our Eye-lids, that we could not see; and I verily believe, that it would have stifled a Man in a very few hours."

The early explorers were men with inquiring minds and they attempted to find reasons for the very cold weather which they encountered. Here is an explanation given by John Alphonse. John Alphonse was the chief pilot for Sieur de Roberval who sailed up the St Lawrence about the same time as Jacques Cartier, and spent the winter near what is now Quebec City. The winter was a cold one and John Alphonse gives this explanation:

The late A. B. Lowe, who was meteorologist at Winnipeg International Airport at the time of his death, had done much research into the historical aspects of his vocation.

Churchill in January. P. PALSSON

And the reason wherefore it is colder in the winter is because the fresh water is naturally more cold than the sea, and is also broad and deep. And also because the land is not tilled nor full of people, and is all full of woods, which is the cause of the cold because there is not store of fire nor cattle . . . and if the country were tilled and replenished with people it would be as hot as Rochel.

In addition to explaining the weather there were attempts made at forecasting it. Such an attempt was made by Thomas Button. Button was the first European to spend the winter in Manitoba. He came out from England in 1612, sailed into Hudson Bay, and wintered at the mouth of the Nelson River. He believed—as, of course, some people still believe today—that the Northern Lights foretold a change in the weather. The narrative of his voyage reports:

This morning was calme but the night before was full of strange Harbours, as they call them, which is a streame in the Element like the flame that cometh forth the mouth of a hot oven; which upon this Coast how faire soever the weather bee, when you see them, yet it is an infallible signe of a storme to follow within 24 houres after, as it proved by this and divers times before.

Seven years after Thomas Button, Hudson Bay was again visited by Europeans. This time the expedition was led by Jens Munck, a Dane. The story of Jens Munck is one of the grimmest in Canadian history. Munck came out to the Bay with a crew of sixty-four men and they set themselves up for the winter at the site of what is now Churchill. The rigours of winter and the lack of fresh food caused scurvy to set in and Munck watched his men slowly sicken and die before his eyes. When spring finally came only he and two others remained alive. These three managed to crawl ashore, grub around for roots and green grass, and gradually, under the warming sun, found their strength return. Then by some superhuman feat the three of them sailed their ship safely back to Europe.

Despite all his hardships, Munck kept a journal during the winter and here are some of his comments about the weather:

Nov. 27—There was a very sharp frost by which all the glass bottles we had (which contained all kinds of precious waters) were broken to pieces, wherefore it is observed that whoever intends to navigate such cold seas should supply himself well with tin bottles.

Jan. 25—I had the body of Hans Brock buried and ordered 2 small cannon to be discharged which was the last honour I could show him. But the trunnions burst off both falconets and the man who fired them very nearly lost both his legs so brittle had the iron become on account of the sharp and severe frost.

Jan. 28—The cold was so severe that a tin pot with water in it burst in the night by frost. So I do not know in what kind of vessels any precious waters may be preserved on voyages to such cold seas as these.

One of the precious waters whose preservation was causing concern appears to have been beer. In any event, considerable pains were taken to keep it from freezing. Mr Thomas Gorst, who wintered at Charles Fort (later Rupert's House) on James Bay during 1670-71, appears to have found the answer. His journal entry for September 20 is: "Wee rummage the Hold get out the Beere & bury it under ground to preserve it from freezing that wee may not want for our homeward bound Voyage. And the Beere which Wee spent upon the place wee brewd there having malt along with us from England for that purpose."

The cold of the Canadian North was sometimes blamed unjustly, however, for the problems encountered. For example, Captain Luke Foxe, sailing through Hudson Strait in 1631, makes the following comment:

As also this may be noted that here . . . the Compasse doth almost loose his sensitive part, not regarding his magneticall *Azimuth*, without much stirring. The smooth water may be some cause, the Ship wanting her active motion; . . . I should rather think that the sharpenesse of the ayre, interposed betwixt the needle and his attractive point, may dull the power of his determination. . . .

The fierce storms which so often rage in Hudson Bay played a vital role in one of Canada's great naval battles. During the summer of 1697 the French warship *Pelican*, commanded by Sieur d'Iberville, sailed into the Bay with intent to capture York Factory from the English. The English sailed out to meet the foe and a bitter battle ensued but it was the wrath of the elements rather than the guns of the adversaries that played the major role. The storm was described in a letter from the French soldier La Potherie to the Duke of Orleans:

The east-north-east wind . . . kept getting stronger and stronger. A frightful sea arose, driving us steadily towards the shore. . . . The bitter cold, the snow, and the ice which covered our rigging were cruel obstacles. . . . I cannot express to you the sad state of the crew. . . . It was night, and the horror of darkness was added to the fear of death . . . our rudder was carried away and we thought ourselves utterly lost. As the tide rose, our ship, which was drawn along in the current, imperceptibly went aground. All these various movements made the hair of the most careless stand on end. Finally, about midnight, the ship split along the middle of the keel, and filled with water above the between-decks.*

It was probably accounts such as these which led to the comments about northern Canada by John Oldmixon in his *The British Empire in America* published in 1708. In this work the lands lying around Hudson Bay are dismissed as follows:

. . . which being the most Northerly, should have been treated of first, . . . [but we] were loath to let our History open with the Description of so miserable a Wilderness and so wretched a Colony. For rich as the Trade to these Parts have been or may be, the way of Living is such that we cannot reckon any Man happy whose Lot is cast upon this Bay. . . . for that country is so prodigiously cold that Nature is never impregnated by the Sun; or rather, her barren Womb produces nothing for the Subsistance of Man.*

A man who shared John Oldmixon's views about Canada was Louis Antoine de Bougainville. De Bougainville served in Canada during the French and Indian wars as General Montcalm's aide-de-camp. Here is what he thought of the Canadian weather:

Jan. 8, 1757—A violent snowstorm this morning. It lasted all day in a horrible fashion. It is impossible to conceive of a viler sort of weather.

Jan. 9, 1757—This morning fell a freezing rain accompanied by an icy wind which bit deep. The roads are impassable. One could not understand how frightful this country is if he has not been here.

De Bougainville soon had enough of Canada. When next heard of he is sojourning on the island of Tahiti.

However, despite the inclemency of the weather, the hardy men from the old country continued to come out to Canada. The Hudson's Bay Company built a string of posts along the coast from Churchill to Moosonee. Then they moved inland along the rivers, reaching as far west as the Athabasca country and the mountains. The journals of the men who lived at these lonely posts are full of comments about the bitter weather they were forced to endure. But, although they were often discommoded, the weather seldom seems to have prevented them from carrying out their purpose.

I am always impressed by the account which Samuel Hearne gives of his encounter with an arctic blizzard. This occurred on his second, and unsuccessful, attempt to reach the Northern Ocean from Fort Prince of Wales. There had, indeed, been an omen of ill to come at the very beginning of the expedition. The governor of Fort Prince

*Quotations from J. B. Tyrrell, Documents Relating to the Early History of Hudson Bay, courtesy The Champlain Society.

of Wales, wishing to give some encouragement to Hearne on his hazardous journey, ordered that a volley be fired from the guns on top of the fort. However the snow was so deep on the ramparts that few of the cannon were to be seen and it was necessary to dispense with the ceremony; in lieu of which the governor and officers gave three cheers to the departing Hearne.

The expedition ended in failure when Hearne's quadrant was broken, and it was on the return journey to Fort Prince of Wales that the aforementioned blizzard occurred. It appears to have been one of the typical blizzards which from time to time strikes western Canada in winter. The Hudson Bay low deepens, high pressure over the Mackenzie intensifies, and the tightening gradient between the two sweeps cold air on forty- and fifty-knot winds across the barren lands and over the prairies. Such storms often immobilize life in civilized communities today, but this blizzard back in November 1770 did not immobilize Hearne. Here is his account of it:

> Before daybreak . . . the weather became so bad, with a violent gale of wind from the North West, and such a drift of snow, that we could not have a bit of fire, and as no good woods were near to afford us shelter, we agreed to proceed on our way. . . . and though the weather was bad near the surface, we could frequently see the moon, and sometimes the stars, to direct us in our course. In this situation we continued walking the whole day, and it was not till after ten at night that we could find the smallest tuft of woods to put up in; for though we well knew we must have passed by several hummocks of shrubby woods that might have afforded us some shelter, yet the wind blew so hard, and the snow drifted so excessively thick, that we could not see ten yards before us the whole day. Between seven and eight in the evening my dog, a valuable brute, was frozen to death; so that his sledge, which was a very heavy one, I was obliged to haul. Between nine and ten at night we arrived at a small creek, on which we walked about three-quarters of a mile, when we came to a large tuft of tall willows. . . . Being much jaded, we determined not to proceed any farther that night.

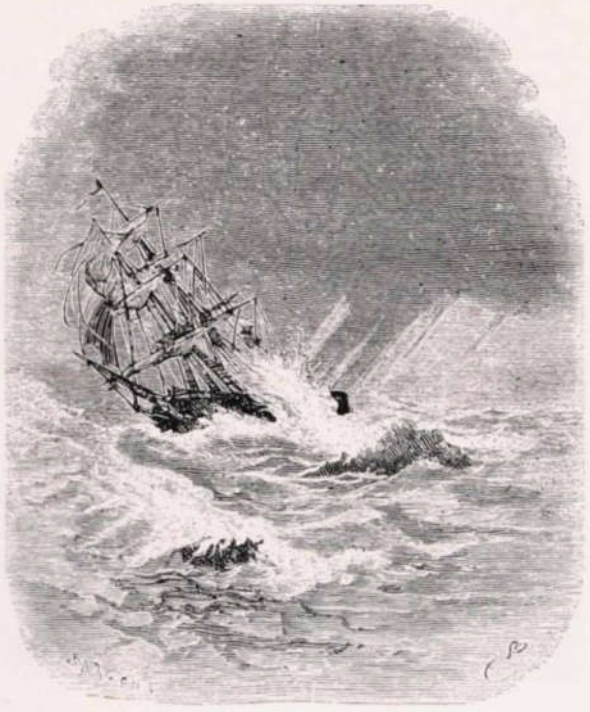
One of Samuel Hearne's friends at Fort Prince of Wales was William Wales, one of the foremost mathematicians and astronomers of his time. Wales was sent out by the Royal Society to observe the transit of Venus and spent the winter of 1768-9 at the Fort as guest of the Hudson's Bay Company. He brought with him meteorological instruments—thermometers and a barometer—and during his sojourn he kept a regular meteorological record—the first which we have for Manitoba. It is interesting to note that temperatures two hundred years ago were very similar to those we experience today.

Wales seems to have taken the cold weather at Churchill in his stride; at any rate he had few complaints to make about it. He was disturbed for a time, however, by noises in the night. "I at first mistook these," he says, "for the report of one of the guns which are on top of the house; but which, I have since been informed by the officers of the Factory, were caused by one of the beams of the house being rent by the expansive power of the frost."

Many more illustrations might be given of the manner in which the rigours of our weather harassed the early explorers, but one will suffice. This one is from the journal of Captain James as he sailed into southern Hudson Bay in the autumn of 1631:

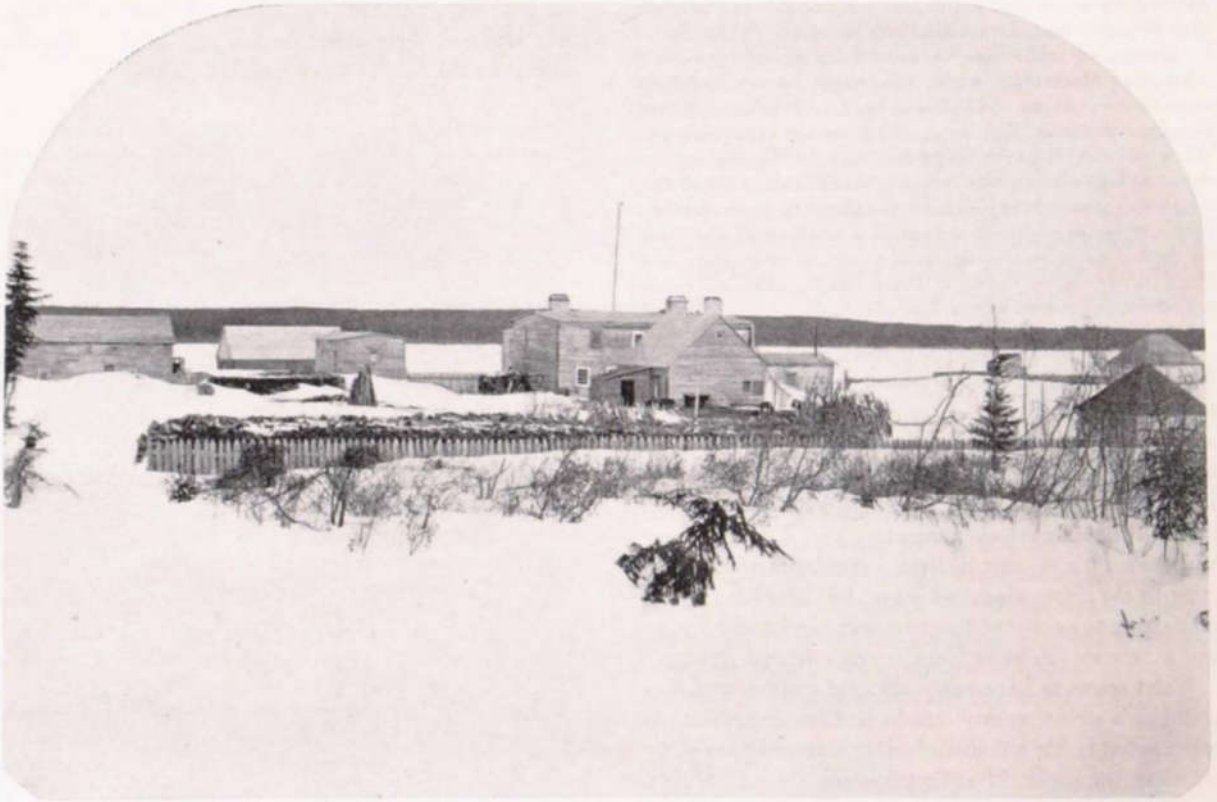
> In the Evening there came a great rowling Sea out of the N.N.E. and by eight a Clock it blew very hard at S.E. . . . the Sea was all in a Breach: and to make up a perfect Tempest, it did so Lighten, Snow, Rain and Blow, all the Night long, that I was never in the like: . . . nor I, nor any that were then with me, ever saw the Sea in such a Breach. Our Ship was so tormented, and did so labour, with taking it in on both sides, and at both ends, that we were in a most miserable Distress in this so unknown a place. . . . the Sea, indeed, so continually over-rackt us, that we were like *Jonas* in the Whales-Belly.

It is now over four centuries since the first adventurers direct from Europe reached our shores. Great progress has been made since then but still the harshness of our weather remains a formidable factor with which to reckon. When the storms of winter descend upon us we find our lives considerably disrupted. Our cars are stalled, our highways blocked, our airlines grounded. Perhaps, four hundred years after, we are just as often discommoded by the cold as was Sebastian Cabot. ◆



Rupert House

300 Years Old



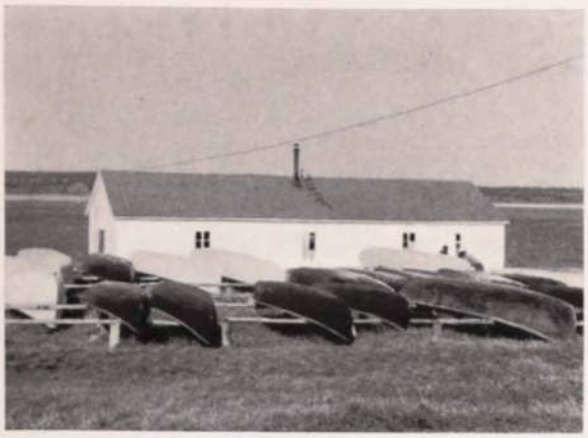
IN SEPTEMBER three hundred years ago a little band of adventurers landed on the shore of a river they called Rupert's on the East Main. Straight from England, their tiny ship, the *Nonsuch*, had been guided towards this haven by the Indians, and there they must remain until the following year. They built themselves a wooden house which they named Charles Fort, after the King, dug a cellar, brewed beer, shot birds and deer, and settled in for a winter such as they had never before experienced. In the spring they traded with the Indians and, with a shipload of furs, more than a year after they sailed they returned to the homeland where at the port of Deal "they report the natives to bee civill and say Beaver is very plenty."

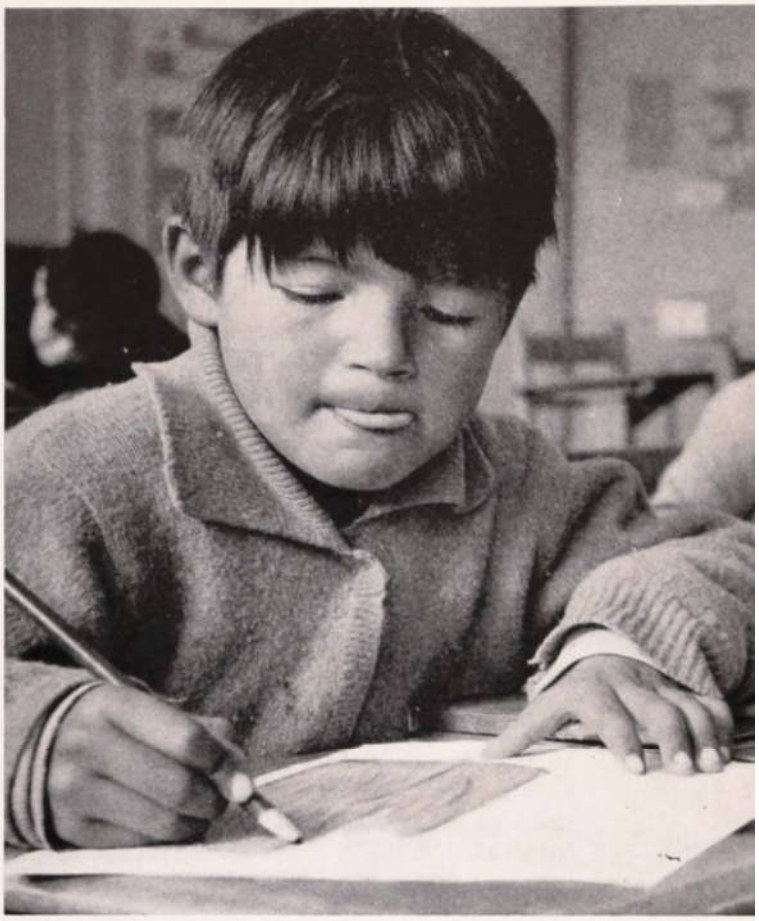
This was the first settlement at Rupert House (for the name was changed in honour of the first governor of the Hudson's Bay Company) and now, on its 300th anniversary, trade with the Crees is still of primary importance at Rupert House on James Bay.

Shown here are aspects of the village over the last hundred years. Chief Trader Bernard Rogan Ross's photo of the poplar grove was taken in September 1866; those of the post in winter, the birchbark canoe, and the Coast Crees, the following year. Rupert House in 1915 is seen in the general view looking towards the river mouth.

In 1934 the thirtieth governor of the Hudson's Bay Company, Patrick Ashley Cooper, visited Rupert House, to be greeted in traditional manner by a *feu de joie* from the Crees. At that time the hundred-year-old dwelling, which was replaced in 1960, was the residence of Company officials. Subsequently a cairn commemorating the establishment of Fort Charles was set up near the store. The recent photos show the village in the autumn of 1968 with its Indian houses, a raft of logs that has been floated down river, mail delivery by aircraft, and racks of canoes outside the building shop where Crees perpetuate an old craft with modern materials and methods. A memorial service, a goose feast, and a cake decorated with the *Nonsuch* marked the birthday of Rupert House. ◆

FRED BRUEMMER PHOTOS





ETUK MAKES A DRUM

By Brian W. Lewis and photographer Lorne Smith

WHEN WINTER COMES and the days get shorter many evenings are spent indoors. The usually flamboyant smile of the Eskimos becomes perceptibly weaker and they begin to think about the great things they will accomplish during the winter months as they wait for the weather to change. There is one man, however, whose smile remains as constant as the pole star, and whose winters follow a pattern that was established a long time ago. His name is Etuk. To him winters were designed for sleeping; one glorious hibernation which lasts unfailingly from October until March with only brief periods in between during which time he will grab something to eat and catch up on latest gossip. Besides his undoubted ability as a sleeper Etuk is also considered a fairly competent authority on Eskimo songs. It was for this reason that I wanted him to make me an Eskimo drum and to organize some singing. The problem, of course, was to catch him some time before October and then to try to interest him sufficiently in the project for him to get the drum ready by Christmas when all the people from the camps would be arriving at Arctic Bay for the Christmas festivities.

I approached him as tactfully as I possibly could one day and, in my broken Eskimo, said:

"I would like you to make me a drum, Etuk. I would like to hear some singing."

"The best thing to make an Eskimo drum is caribou skin," said Etuk.

"All right. I'll get some caribou skin and you can make the drum," I replied.

"You don't have to do that. Any old skin from the sleeping-platform is good enough," said Etuk.

"How long will it take to make it?" I asked.

"You can't make that drum unless you have good wood. If I find some good wood maybe I will make it."

It sounded to me as if Etuk was hedging so I persisted:

"Do you think you will be able to finish it by Christmas?"

"If I can find a nice piece of caribou fur and some good wood maybe I can finish it by Christmas, but I don't know," he answered.

Every day after that first meeting about the drum I searched for Etuk and asked him when he would be starting work on the drum. Always I got the same reply:

"I have found a good piece of caribou fur but I still have to find some suitable wood."

It seemed that 'tomorrow' was always a likely day on which work could be expected to be begun. But it never did.

Then, of course, the snow came. Everything was soon completely covered over. All the packing crates by the warehouse, all the wood on the beach; in short, everything that could have been used by Etuk was no longer available to him. And, of course, as soon as the snow came it was he who came searching for me. Could I not see how hopeless it was for him to make the drum now that everything was covered with snow! It did not look as if he would be able to make the drum by Christmas after all. Anyway, maybe it was better this way. He could get a fresh piece of caribou fur. Soon the caribou would be coming down from the hills and there would be more furs available. Perhaps if he were to wait until the summer there would be some new wood when the ships came! There was very little suitable wood for making a drum on the beach.

Christmas came and the Eskimos arrived from camp. Etuk was awake and quite active in the preparations for the Christmas activities. There was singing and dancing and many of the old Eskimo games were played. But there was no drum.

The subject of the drum had long passed completely from my mind when, one day in May, Etuk came to tell me he had begun work on the drum.

"But what about the good wood you wanted?" I asked.

This seemed to stop him in his tracks for a moment but he recovered quickly and said:

"A long time ago there was very little good wood. People used what they could find."

"But what about the new caribou fur? Did you get that?"

"You really don't need that new fur. Any old fur from the sleeping-platform is good enough."

"And when do you think you will finish it?" I asked. I did not expect a reply but he beamed impishly.

"You can come and watch me work and you will judge for yourself," he said.

It was spring. It was almost seven months since I had first asked Etuk to make me a drum. When I did visit him the drum, to my surprise, was already in an advanced stage of construction. He had soaked some very, very old caribou skins in water so that the fur could be easily removed, then he had scraped the fur off. Despite his

Brian Lewis and Lorne Smith are teachers in the northern service.

The wooden frame completed, Etuk prepares to cover the frame with a scraped caribou skin.

insistence on the need for good wood he had obviously obtained the frame by chopping a number of lengths from a packing-case lately recovered from the melting snow. The wood too had been soaked in water. First it had been cut into long strips about three inches wide and a quarter of an inch thick. It had then been boiled in water and bent into half circles. Only two of the long strips of wood had been required, though some smaller pieces had been used to strengthen the join between the two pieces. The handle had then been slotted into the edge of the frame and tied. The drum was about two feet in diameter which was a little smaller than I expected. The traditional drum usually exceeded three feet.

When I paid my visit to Etuk he was in the process of putting the skin on the frame. He had cut a groove all the way around the outside of the frame about an eighth of an inch deep. He had then stretched the skin tightly over the frame and begun to wind some twine around the outside edge of the frame securing the skin into the groove very much as one would tie a piece of cloth or paper over the top of a jar.

At last the drum was finished and, despite the fact that I had waited about eight months for it, I was quite excited. It did not look much I must confess, but I was anxious to hear it being beaten. I paid him for it and thanked him for having done such a good job. Then I asked him to play it for me. It was then that he remembered he had forgotten to make a drum-stick.

"I will play it for you tomorrow," he said, "but first I must make the stick."

Another week went by and still Etuk had not arrived with the drum-stick. He had kept the drum, to do some practising no doubt. Nobody had seen him. This was not strange because Etuk had perfected a kind of vagabond existence in which he moved from household to household receiving warmth and sustenance in return for the wealth of his personality and humour. But I was soon to track him down.

One night I heard a loud booming sound from one of the tents. I went to investigate and found Etuk giving an impromptu concert. He gave me a whimsical smile when I noted that he had finished the drum and the stick.

Attooat, the oldest woman in Arctic Bay, tries a few beats on the drum in the school, her tattooed arm displayed as she wields the drumstick.

Kudloo, a visitor from Pond's Inlet tries a few fancy steps as Etuk, at far left, and friends supply the lyrics.

"That sounded very good," I said when he had finished a song.

With usual Eskimo modesty he said he thought it was a little bit good, but could be better. It would have been wrong for me to talk about the drum in the middle of a recital so I said goodnight and left. A few days later though, in the middle of the afternoon, I visited the tent in which Etuk had given his concert and found him sleeping. Wasting no time on preliminaries I asked him if I could have the drum now that he had finished it.

"I am not happy about the drum," said Etuk.

"Why?" I asked, not wishing to be too elaborate in my questioning.

"Because it took so long to make," he replied.

I could not understand the logic of this and thinking that perhaps he had some structural alteration in mind, I decided to wait and say nothing. After a long silence he continued: "That drum took me nearly one year to make. And now that it is finished it has to be taken away."

He went on at great length to say how filled with joy he had been during the making of the drum, and how much pleasure he got from playing it.

It was late evening when I left Etuk. I had listened, mesmerized, as he had charmed me into letting him keep the drum, at least until I was going to leave the settlement. Perhaps my house was just a little bit too warm and if I were to keep the drum in these first critical months of the drum's existence maybe the frame would crack.

On those long wonderful summer evenings and during the cool nights when no one could sleep, Etuk had crowds around him as he banged on the drum and chanted the old songs. In the early hours of the morning when everybody was tired from singing and dancing so much Etuk would finally pick up our drum and, as everyone strolled back to the tents, the families would contend mightily with one another as to who should lodge Etuk, the Eskimo troubadour, that night. ◆

RED FOX

In almost any part of Canada the red fox may be found, though it may not always be red. Other colour phases are the cross fox and the once highly prized black or silver foxes, any mixture of which may occur in one litter. The red fox belongs to the wild dog family which has members scattered throughout the world. In spite of its popularity with furriers for its lustrous pelt and its unpopularity with farmers the fox survives and has not retreated to the wilderness but often lives close to settlements. Its food is varied; mice are the main item but it sometimes takes young birds or muskrats, frogs or snakes, rabbits or woodchucks. It likes insects, too, particularly grasshoppers, and it balances this diet with grass and wild fruits. The fox in the photo below is digging out a vole.

PHOTOS BY LEONARD LEE RUE III

This red fox is bringing home a ground squirrel for its young. The den is used year after year and is sometimes a burrow made by another animal. Here the four to nine kits are born in April or May. When they are about five weeks old the fluffy youngsters venture outside where they play like puppies, romping and wrestling and scrapping for food. The devoted parents both share in feeding and training their young and the family remains together until late autumn when the little foxes are grown and able to look after themselves. The following year they will have reached maturity and will seek mates to begin their own families.

RABBIT RIVER FREIGHT HAUL

By A. J. Dalrymple

Swing leaving Cold Lake with sleigh loaded with two tons of trading post supplies, two tiers of sacked oats and four tiers of baled hay, total load four tons.

A BUNCH OF US were sitting around the living room stove in the trading post at Cold Lake, northern Manitoba (in the area of present Sherridon), on a blustery day in April, 1933; and all the conversation centred on the most momentous question of the hour. What happened to the Rabbit River freight "swing"?

There was plenty of cause for worry. The swing, composed of seven teams, had left for Rabbit River trading post one hundred and seventy-five miles to the north, twenty-eight days ago on a round trip that was scheduled for twenty-four days. The teams were now four days overdue at Cold Lake; and that could add up to accidents, privation and hunger.

The scene of the worried speculation was the cozy log cabin trading post with its sofa and rocking chairs, bear rugs on the floor, a piano in one corner, and in another, a big cage occupied by Polly, a brilliant green and garrulous parrot.

But while it was warm in the cabin, the mental air was chill with much talk about the difficulties of the freight haul, followed by forecasts of changing times and new methods of moving supplies. The conversations went on hour after hour. One of the men, more aviation-minded than the rest, expounded on the future of aircraft.

"You mark my words," he said. "This will be the last year of freighting with horses. The aeroplane is the carrier of the future; bigger machines; bigger payloads; and. . . ."

"Aw, shut up!" screamed the parrot, and with a cackling laugh she retired to the far corner of her cage.

We smiled briefly, and one man, sucking on a yellow clay pipe, blew some acrid smoke rings in the general direction of the impudent bird. But we didn't shut up. We went back over all the events of the winter; all the facts and figures on what might be the final ringing of sleigh bells on the Rabbit River run.

Transport Limited of The Pas had the contract for the Rabbit River run that year. Between February 15 and March 20 a snowplough pushed by four horses cut a trail over lakes and portages for the one hundred and seventy-five miles between Cold Lake and Rabbit River. When that job was completed a series of blizzards whipped across the sub-Arctic and filled the whole works in again.

Meanwhile the freight had arrived from Winnipeg. The horses, rented from prairie farmers, had been shipped by rail to Cold Lake. They were well fed and conditioned for the struggle involved in moving the tonnage to Rabbit River.

H. F. McKinnon, manager of Transport Limited, was in charge of operations. "Big Carl" Nyholm was swing boss in charge of seven drivers and a handy man. The swing was composed of seven teams, some of four horses and some of two horses. For every ton of freight moved to Rabbit River, one ton of feed had to be carried for men and horses.

The sleighs were loaded with the heaviest supplies on the bottom; cases of traps, firearms, tobacco, flour, groceries, dry goods, oil and candles. On top were placed sacked oats for the horses; and then tier after tier of baled hay to a height of fifteen feet; and the whole "jag" was bound together with poles and baling wire.

Travel equipment included two first-aid boxes containing basic medicines. The boxes were placed on separate sleighs, a necessary precaution in event of one sleigh crashing through the ice of one of the lakes. If a man became ill, the swing boss prescribed, and the sufferer was expected to get well as quickly as possible. If a horse got sick the swing boss appointed a man to "sit up with baby".

Equipment also included a tent and a camp stove for every three men. Every teamster had his sleeping bag, and packed his own grub-box with the food of his choice; food for a month, along with his own utensils. This system was worked out in the interests of harmony. There was no criticizing the cook, or any squabbling over who would wash the dishes on the Rabbit River run.

The trail was rough on everything, and so it was necessary to carry boxes of nuts and bolts, spare parts, axes, pails, and harness repairs.

Mr Dalrymple, now living in the west, spent several years travelling in subarctic eastern Canada.

We talked about all these things, along with the dangers and delays on the trail. A load might tip over two or three times a day if the going was bad. If a blizzard blew up it might reduce travel time to a mile and a half a day. We could only wait until the swing returned.

It was getting dusk when a trapper arrived at the cabin. He was travelling by pony and toboggan, and he brought the news that he had passed the swing ten miles to the north. Men and horses were in good shape, and should arrive in Cold Lake at noon the next day.

Now that our fears were allayed, did we crawl into our bedrolls, and enjoy the relaxation of a good night's sleep? We did not. We sat up and talked half the night, speculating on what misadventures had delayed the teams. Then we lay down, and a couple of hours later, impatiently up again, snatched a breakfast of bacon, eggs, and beans, and then up to a high hill, straining our eyes across the snowy lakes, the dark green forests and the barren ramparts of dull grey and blackened rock stretching into infinity.

Then we saw the swing; the teams emerging from the woods, and hitting the rough downhill trail onto the lake. We counted all seven. They were on the trot.

Half an hour later the swing pulled into the clearing. The bewhiskered swing boss swung down from the leading sleigh after twenty-nine days on the trail. With scarcely a nod at the worried group that gathered to meet him, he supervised the watering, feeding and bedding of the horses. When everything had been done for the comfort of the animals he described the trip in two sentences.

They had been harassed by storms which had slowed their progress, and when they were within twenty miles of Rabbit River, their dwindling feed told them they could go no farther and hope to get out alive. So they cached the freight in the forest and made a dash for Cold Lake.

There would be two days rest for the horses while the men loaded the sleds for the next trip. Those drivers were real horsemen, quiet, businesslike around the loads, but shamelessly sentimental about their animals. They curried them, brushed them and petted them, sparing no effort to keep them in top-notch condition for the tough days ahead.

And now they were loading the sleighs, carefully placing all goods in the best possible position to reduce top-heaviness to the minimum.

One teamster stopped for a breather. He pulled a box of snoose (snuff) from the folds of his parkie, stuffed a pinch under his lower lip, and turned to me:

"Did it ever occur to you what all this means?"

"Go ahead. Tell me."

"We struggle and the horses struggle day and night to get this stuff to Rabbit River. The post manager and assistant live lonely lives. The trappers out in the tundra suffer undreamed of hardships, risking their necks every day; and all for what? For fur. For whom? For some woman swanking around some night club in Chicago.

"Yes, sir, if you trace it all back to the beginning of time, you find that every move a man makes in his life is to satisfy the whims of some woman somewhere. You do it, and I do it; and we will go on doing it the rest of our lives."

They were ready to pull out. The seven teams stood on the icy road and looked up the hill. The swing boss spoke. The seven teamsters chirped their horses. They lay into the collars. The frosted runners grated on the rough surface. The heavy loads moved. Straining and plunging on the precarious footing the teams reached the summit, turned through the settlement, and stopped for their first breather in the woods.

They moved on again, the loads swaying dizzily on the down grade towards the lake. They reached the level where the going should have been fairly good, but water had come up under the deep snow and the slush tricked them. A top-heavy load turned over, quickly followed by another.

Tons of tea and tobacco, bags of flour and barrels of oil, and baled hay were scattered in all directions. Yet not a teamster swore. No man jerked a horse. There was no standing around cursing their luck, the weather, or the tricky snow conditions. It was part of the job. They simply went to work and rebuilt the loads.

Once the teams started on their way again, we realized suddenly that we had been standing around in slush for a long time. Our moccasins were wet. We shivered and headed back to the trading post.

The aviation-minded man got on his favourite subject of "flying boxcars," saying: "Sure, the horse is the time-honoured way of doing this job. But just remember that flying is in the pioneering stage. Payloads now are about one to two thousands pounds. Wait until we get reliable maps, and air strips, and beacons and hangars. Sure, air freight is a gamble at present. Traders have to be sure they get their groceries. They don't like to take too many chances on aircraft just now, but. . . ."

He was interrupted by the trapper: "I wouldn't dwell too much on that subject any longer if I were you. I notice that parrot is all set to laugh at you again."

The post manager smiled: "Nothing of the kind. Polly went to sleep as soon as he got on the subject of flying boxcars. But it's true, some morning Polly will wake up to find that the new era of air freight is a way of life in the Northland." ◆

QUEBEC FILM BUREAU

Second Chance for Umingmak

BY DOLLY CONNELLY

Photographs by the author unless otherwise credited.

ONCE I SAW a band of muskoxen humping in flowing, fast gait, astonishingly graceful, through coarse frozen tundra grass on a fog-shrouded island of the Bering Sea. Suddenly in dim winter twilight, like a forgotten vista out of the Ice Age, they wheeled in clouds of self-generated steam and turned to study me. Some deep atavistic memory was stirred as if I'd been privileged to witness their migration across the arctic land bridge that once joined Asia to the North American continent.

Just recently I rolled a huge plastic ball into pastures of Project Musk Ox at the University of Alaska, and moved into position to photograph the head-batting fun as pushball, Arctic League, got under way. One of the shaggy animals whirled into a dance of pure joy, hula skirts of hair waving, leaping, twirling on hind legs and dashing around a clump of trees in an ecstasy of motion, wild and free. It was a little like spotting a diplodocus at play in the backyard.

I don't know which picture was the more enchanting, but from a purely personal standpoint, having met the muskox I'll never be the same again. They have this effect on everyone who knows them well—Vilhjalmur Stefansson, Professor John J. Teal, Jr, the distinguished arctic ecologist, and other scientists and students of the Institute of Northern Agricultural Research. Headquartered at Huntington Center, Vermont, this organization is devoted to the domestication of both arctic animals and plants, concentrating since 1954 on work with muskoxen (there is an account in the Summer 1964 issue of *The Beaver*).

The 17th century H B C explorer, Henry Kelsey, first to describe the peculiar animal in North America, was less enthusiastic about the "ill shapen beast" though he appreciated its food value. Muskoxen are, you see, unique among mammals of earth. Creatures of mythology, bearers of the golden fleece, they are astonishing relics of the Pleistocene era saved by a stroke of geologic intervention. They once roamed Alaska, Canada, and northern parts of the United States, and existed in immense numbers upon arctic grasslands of Eurasia. Paintings of them appear on walls of caves of southern France known to Stone Age artists. The species escaped total annihilation by man, the hunter, when the Ice Age stranded small bands of muskoxen behind a barricade of ice in northeast Canada and Greenland. Those that survived elsewhere were slaughtered by waves of human emigrants, the last of Alaska's herds killed by the guns of whalers in the late nineteenth century. Muskoxen long were thought to have followed receding glaciers of the last great Ice Age far northward through choice. Now it is believed that their method of defence—a protective circle in the manner of a wagon train threatened by Indian attack, with heavy horned heads of adult animals on the perimeter and calves and yearlings protected within—brought about their near-extinction. The menacing, lowered heads were an excellent protection against the natural enemy, wolves, but no defence at all against prehistoric man armed with the crudest spear.

Three centuries ago, arctic adventurers were astonished to see small clouds of gossamer blowing on the summer winds, a substance so light and silky that often it caught in masses on dwarfed trees growing in upper layers of tundra over permafrost. It was totally out of character with the environment, so much so that discoverers sought out the source of supply. They were incredulous to learn that the wool substance was shed from the massive shoulders, pale saddles and broad backs of a long-haired animal whose head was crowned with heavy, yoke-shaped horns. Subsequently the literature of the time carried references to the strange "monster" who carried under the long chain mail of his guard hairs, descending almost to his spatulate feet, an underwool finer than any other substance known in nature.

Maligned in countless tales of derring-do as "the world's most dangerous game animals," muskoxen provide no sport at all for trophy hunters and are dangerous only to those who capture them. They are absurdly misnamed as well, for they are not oxen nor do they have musk glands. Even the scientific name, *Ovibos moschatus*, is a misnomer as muskoxen probably are ancient ruminants who started off independently somewhere between the antelope and goat species, an offshoot of antelo-capra.

DOLLY CONNELLY FOR CECO PUBLISHING COMPANY

Professor John J. Teal Jr., arctic ecologist, director of the Institute of Northern Agricultural Research, with muskoxen of the Alaska University project.

Eskimos call him "umingmak," the bearded one, and long have known his wonderful underwool as qiviut, a fibre far warmer than the silken down of the northern grey goose. Muskoxen bear kinship to the extinct Giant Muskox whose massive bones turn up now and again in gold-dredging pools of Alaska and sometimes in newly-eroded chasms of far northern rivers. Bulls can weigh to half a ton and bear some superficial resemblance to the American bison.

By modern times, the muskox had become one of earth's rarer animals, numbering by the most optimistic guess 14,000 on his isolated polar pastures, Canadian Arctic islands, Pearyland to Scoresby Sound on the northeast coast of Greenland, and the Thelon River Game Sanctuary in Northwest Territories. Now the animal's potential for the benefit of mankind at last is being recognized, and shows promise of reaching culmination in the creation of a new economy for northern peoples world-wide.

Stefansson's enthusiasm is the basis of most modern appreciation. States Professor Teal, director of the parent Institute of Northern Agricultural Research: "Stefansson's plan for domestication claimed too much for the animal. He believed that muskoxen could provide great quantities of milk and would make fine dairy and meat animals. But if you were to breed muskoxen for milk production, pendulous udders would freeze in winter. Use of the meat isn't practical because the wool is so valuable. Emphasis was misplaced until our project got underway, but was logical for the times. Muskoxen supported numbers of expeditions in the Arctic. Peary's trips to the Pole were based upon muskox meat. A few of the animals were transplanted to Spitsbergen in the twenties. Then when the Germans occupied the islands in World War Two, Norwegians took to the mountains and lived on the meat. Sverdup tells of shooting muskoxen everywhere. Whalers of the nineteenth century, wintering over in arctic seas, right up until 1926 when laws finally were passed to protect the few remaining muskoxen, exterminated them not only for food, but as "sport" of a kind, a relief from boredom.

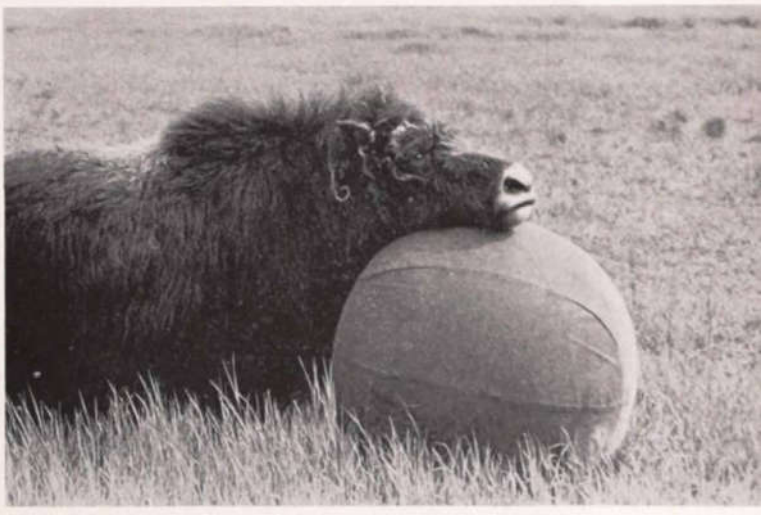
"Then when the prairie bison became extinct, muskox were slaughtered for carriage robes. In five deadly years at the turn of the century 14,000 were killed—probably more than the total population left today."

More than thirty years ago, wild muskoxen were transplanted from Greenland to Nunivak Island off the coast of Alaska and to uninhabited mountains of north-central Norway. There they have flourished, as habitats are free of wolves and the animal protected by international law. The Nunivak Island herd reproduced rapidly from 33 animals to near 800 estimated current population. Some of the increase will be transplanted to the north slope of Alaska's Brooks Range this winter. Others—to 250 animals over a period of five years—will be captured as calves by Project Musk Ox to bolster domestic populations.

Muskoxen are at their most beautiful when they run, as long hair flows in a waving pattern.

Domestication began in 1954 with capture of three calves and four more the next year in the Thelon River Game Sanctuary. These seven bottle babies were taken, with tender care, to John Teal's Vermont hills farm. There they gentled within three days, demonstrating an absolute eagerness to establish good relations with their captors and master the routine of American farm life. Professor Teal reports an experience just after their advent in Vermont. "Our dogs came up to the fence. The muskoxen, whose natural enemy is the wolf, either saw through to the origin of that selective breeding or mistook the dogs for wolves. With great snorts they dashed for me, stamping their small feet on the ground, and formed a defence circle with me in the centre. I knew then that I had been accepted."

Affectionate, intelligent, the "vicious" muskox—most fearsome of "game" animals—turned out to be the winning personality of the animal kingdom. They soon learnt to open gates, pick locks, pick pockets, play ball, snuffle the lenses of cameras, lean against visitors to induce blissful scratchings, and to respond to their Eskimo names. Ten years of research in physiology, taxonomy, diseases, genetics, behaviour and response to management were carried out, culminating in establishment of a breeding herd on 142 acres of University of Alaska grounds with captures from the wild herd on Nunivak Island, financed by W. K. Kellogg Foundation grant.



Favourite plaything in the University of Alaska pastures is a giant push ball, which the animals butt with their heads. Herd manager Larry Rubin, student at the University introduces the ball. The next picture shows push ball, Arctic League; and then, the winner. Muskoxen are dehorned for protection from each other.

HUGH STRATFORD PHOTO

Young females lined up in one of the pens awaiting the weighing procedure.

Capturing proved a frustrating procedure, as the slightest approach to the animals caused them to circle, heads lowered ready to attack, with the wanted young safely hidden within the group. They quickly mastered every trick tried on them, reducing a good segment of the Alaska faculty to a state of total exhaustion. Finally it was discovered that one fright scatters the circles in all directions. Muskoxen are terrified of the downdraft of helicopters. Professor Teal, who personally has captured 105 muskoxen, now combines football tackling techniques with some herding by aircraft for safe capture of young without harm to protective adults. These twenty-three youngsters, now mature animals, have come through two successful breeding seasons, with the birth of fuzzy, bright-eyed bundles of wool in early summers of 1967 and 1968. It is the most decisive reversal of the fate of the rare polar mammals since Folsom man learnt that he could walk to within ten yards of a circle of muskoxen and throw a stone-tipped spear into the back of a lowered neck. Says Professor Teal:

"Our muskox cows trust men completely. As soon as the calves are born we are able to pick them up, examine them and weigh them without undue anxiety on the part of the mothers. This we feel is the ultimate proof of tameness, that they trust us with their newborn. Even a domestic cow will rush a farmer right away from her calf, but not our muskox mothers. I am deeply touched and gratified." The number of muskoxen on university pastures has increased to forty-six animals as of summer, 1968.

Muskox mothers and babies come up to Ralph Jensen, herd helper, for scratching and petting.

FRED BRUEMMER PHOTO

At Old Fort Chimo muskoxen browse in the paddock, with the Koksoak River in the background; the former H B C buildings are used in connection with the muskox "farm".

The Institute suggested to the Quebec Government, in the summer of 1963 and in response to petitions it had received from Eskimo village councils, the desirability of the domesticated muskox and its products as a new source of livelihood for the Eskimos of northern Quebec, and offered its long term collaboration in the capture of breeding stock and the establishment and management of a breeding-demonstration station. After several years' discussion, and with the enthusiastic offices of Professor Jacques Rousseau, the plan was accepted and placed under the aegis of the Direction Générale du Nouveau-Québec, the administrative branch in charge of the development of Quebec's vast northern territories.

A site was chosen at the abandoned village of Old Fort Chimo, on the Koksoak River which flows into Ungava Bay. The old village lies seven miles downstream and on the opposite shore from the new Fort Chimo. It had been a trading post for nearly a century and a half, and is located upon a wide, grassy river shelf offering ideal pasturage. The town was abandoned about seven years ago and most of the houses have been torn down or moved to the new Chimo, selected because of a former military airfield built by the U.S. Army Air Force during World War Two, and now the administrative, educational, and communications centre for northern Quebec. The buildings of the old Hudson's Bay Company trading post were leased for use as a residence for the station manager, Eskimo assistants, storage, and a barn for weighing the animals and qiviut-gathering.

In August of 1967 the Institute sent an expedition north to Fosheim Peninsula on Ellesmere Island, where perhaps the heaviest concentration of wild muskoxen is located, with a goal of capturing twelve female and three male calves, its seventh capturing expedition. In the course of two weeks, and many logistical problems, the desired number (and ratio) of calves was captured, and flown south 1,800 miles to Old Fort Chimo, arriving the first week in September. There the animals quickly became tame and thoroughly adjusted to the routines of management, and, incidentally, captured the imagination of the Eskimo residents from many miles around who visited daily as long as the river was ice-free. Eskimos call the station Umingmakmiut, Place of the Bearded One.

As agreed, the Institute has provided a man experienced with muskoxen as Station Manager for the first five years, a Quebecker, Diederik Bellaar-Spruyt, charged not only with the complicated early years of raising muskoxen, but also with developing the facilities of the station and teaching the Eskimos muskox husbandry. With the able assistance of his talented wife, Joan, this bilingual couple (French and English) has succeeded in the most important task of all: establishing rapport with and gaining the trust of the Eskimos for whom the project is designed. Joan, in addition to raising her own lively son and serving as nurse and counsellor, is deeply engaged in teaching the Eskimo women how to knit and weave products for the market from qiviut. For their part, the Eskimos, regarding the project as their own, have responded with enthusiasm, even to the point of several families moving back to the old village. An already established co-operative for Eskimo handicrafts in new Fort Chimo has made the task even easier than expected. The main point is that the local people have never been told that they "ought" or "should" or "will," but have been allowed to discover the project for themselves and to respond in their own way. The Institute, in addition to its establishment and management role, also will provide markets and price support for the new industry.

The fruitful collaboration between the Direction Générale du Nouveau-Québec and the Institute thus has laid the foundations for new employment, home industry, and cash income for many Eskimo people in northern Quebec.

Chief value to the northern economy is the golden fleece of the Arctic, which is shed annually in one fell swoop. Breaking away from the skin, qiviut (pronounced kée-vee-oot) works through the long guard hairs. "Shearing" is about as difficult as peeling off a sweater. Each animal drops five to six pounds, compared to six ounces of pashm from the cashmere goat. One pound of the precious fibre, valued between $35 and $50, spun in forty-strand thread, makes a ball twenty-five miles long! A knitter can work for a long time with a quarter-pound of qiviut yarn.

Garments woven of qiviut are so light that the wearer scarcely feels them, yet warm enough to keep the wearer cozy in temperatures well below zero. After all, qiviut keeps muskoxen contented at sixty degrees below zero. The yield from raw stock is about seventy per cent as loose guard hairs shed with the quiviut are removed easily in the processing of the wool.

Prime idea is extension of man's habitat beyond the temperate zone. When breeding herds are sufficiently large to spare the cadre of new domestic herds, the muskox will take his giant step out of the Ice Age and into the Twentieth Century economy. A sub-station on the Alaska coastal tundra, once thought to be as much as a decade away, is just a couple of years off, now that permission has been granted by Alaska state and U.S. federal governments for 250 additional captures on Nunivak Island. This winter two Greenland Eskimos will be given Institute scolarships to come to the University of Alaska for studies in animal husbandry. Before the end of 1968, the first qiviut products will be on the market. These will be "smoke rings," to be re-named in the Eskimo tongue, a kind of lacy hood or mantilla of extraordinary delicacy and beauty.

Wet baby about three weeks old demonstrates the value of qiviut in keeping animals warm and dry. When this picture was made, it had been raining heavily for hours, yet water has not penetrated the underwool, but drips off the long guard hairs.

The Castle spinning wheel, used here by Ann Schell, with qiviut wool, is an adaptation of an ancient European spinning wheel which is suited to village work and which can be made at home by Eskimo men.

Ann Schell, textile specialist, has spent years of technical study to develop instruments of hand manufacture; here she winds qiviut wool skein on a niddy-noddy for experiments in dyeing the yarn.

Mrs Ann Schell, working for a Master of Fine Arts degree at the University of Alaska, will take up residence in arctic villages this winter to teach the subtleties of qiviut garment manufacture to native women. An honour graduate of Southeastern Massachusetts Technological Institute in textile design, fashion and marketing, Mrs Schell has prepared herself with study of the Eskimo tongue and years of experimentation with methods and instruments of hand-manufacture with a growing stockpile of qiviut yarns and threads. The project's textile expert in Alaska, Mrs Schell says: "The value of a qiviut sweater will exceed $200. They are perfectly suited to ski wear and all outdoor winter sport, especially in original Eskimo design. You can knit at least three sweaters from the qiviut shed by a single animal. Can you imagine a dinner skirt of this lovely material, a scarf, or sports coat?"

Mrs Schell's experiments with dyes have been confined to natural products readily available. "I believe they're more harmonious with qiviut, and have placed emphasis upon non-food materials—birch leaves, horsetails, water lily roots, wildflowers, tamarack needles. These result in soft, muted pastels, appropriate to the texture of the yarn."

Along with microscopic tests of washability, colour fastness, shrinkage resistance and other factors has come development of instruments of manufacture which may be copied by Eskimo men for use in native homes. A cross between the hand looms devised by Salish and Navajo Indians has been found practical, as has been the Castle spinning wheel of European village design, hand-cranked carders, the English niddy-noddy and butterfly yarn winders.

"Muskox qiviut is superior to vicuna, cashmere and camel," Mrs Schell explains. "Under the microscope, the average fibre is twice as long as that of cashmere, and thus very strong. There will be little trouble marketing these beautiful things. Dealers in fine garments are requesting distributorship. We are stockpiling wool for commercial spinning, which is being done by Forté of Boston, a concern which specializes in rare fibres. By the time the herds have been placed in the villages, the women will be prepared to manufacture finished garments."

Leaman Ellis of the Bureau of Indian Affairs wearing a qiviut sweater made of natural coloured wool gathered and knitted on Nunivak Island.

DOLLY CONNELLY PHOTO
FOR "FRIENDS" MAGAZINE

Phil Kelly, President of the Native Student Association of the University of Alaska, holding a selectively bred very young muskox calf.

JIMMY BEDFORD PHOTO
COURTESY UNIVERSITY OF ALASKA

This interest in betterment of peoples through wise use of natural assets extends to the remainder of the world north of the sixty-fifth latitude, circling the globe in lands of Canada, the United States, the Soviet Union, Scandinavia and Denmark. Says Professor Teal: "Man for centuries has used just a small handful of southeast Asian and middle eastern animals and plants, and taken them with him wherever he went. As he goes further and further north, he has to provide an artificial environment for them and it becomes less and less efficient. Meanwhile nature has provided animals and plants which are adapted naturally to the various regions and may be brought to the economic use of man, within ecological boundaries. Vast herds of muskoxen on arctic prairies will not upset the delicate balance of nature as muskoxen are grass eaters. The Arctic produces ten times the grass feed that it does lichens and mosses, preferred food of caribou, reindeer and wild sheep, most of it now going to waste. The grazing capacity of the Arctic, about one-twentieth of the earth's land surface, hasn't begun to be touched. Muskoxen are non-migratory. One animal eats only one-eighth of what a cow consumes, because they conserve energy through insulation and docile temperament.

"Norway is readying now to start a breeding station on islands in the northern county of Troms, at about the same latitude as Alaska's Point Barrow. Norwegians got over their skepticism about what we are doing when they saw our motion pictures, showing my children in a swimming pond with this 'vicious, untamable animal'. Iceland's Department of Agriculture is investigating muskox propagation now, and we hope soon to help with establishment of a breeding station at Iceland's Nord Kap, an economic crisis area.

"There's a plan for a station to domesticate the animals in Greenland within the next few years. Many islands of the Canadian north and the Aleutian chain seem ideally suited to muskoxen. Soviet scientists, with their enormous Siberian pasturage, come around regularly to observe what we are doing and say, 'You'll hear from us'. This has been going on for a dozen years and some day may result in expansion of the muskox across the Siberian grasslands—not in our time, but perhaps in the next generations.

"Many of the giant cattle herds of our American west resulted from three cows and one bull. In captivity muskox are bred annually, reproducing at the same rate as cattle. It is quite possible to 'see' them once again covering the arctic prairies as they did when nomadic early Eskimos followed great herds of them across the Canadian Arctic islands, around Pearyland and down to Scoresby Sound. Four such waves, of which we can find distinct traces, date back to 1500 B.C. When the muskox disappeared, so did the people. The muskox never has been able to withstand any hunting pressure. Open hunting seasons, even very limited ones, would spell the end to this practical dream of opportunity for hard-pressed people.

"The greatest problem we'll have in Canada, Alaska and Greenland is the introduction of social change. Arctic peoples don't even have a vocabulary for dealing with animal husbandry. We have to provide for them the entire concept of protecting animals for an annual crop of their wool and the young. We wait until they have demonstrated their real interest, as so drastic a cultural change must spring from desire of the people. Eskimo village councils from one coast to the other are applying for first placement of herds. They need the income not only of the raw product, but we think they also should reap the benefits of the finished product. They're very clever at hand work, though they have no knitting tradition. In Norway and Iceland this will be a snap because the people have an ancient knitting tradition as well as ancient tradition in animal husbandry, the care of reindeer and sheep.

"The quest for qiviut may be the means by which man will open up the north to permanent settlement, and will achieve that greater wisdom, the happy adjustment of economy and environment." ◆

Gulls eggs on the side, please

AFTER BEING STRANDED on a remote island off the eastern coast of Canada for two days without food, my self control snapped and I ate a young seagull. I did so with reluctance. Gulls are not admired by epicures and, anyway, I've always had a special affection for them as interesting and amusing personalities. Eating one somehow seemed a kind of betrayal. Hunger won, though, and I lightly broiled the youngster over a driftwood fire. To my astonishment, that tiny bird—less than half a pound of it—tasted like squab prepared by Escoffier.

I love good food, and especially exotic food. I like to think there is a finely-tempered palate guiding me, but I doubt it. The evidence suggests that my devotion to good food is a reaction to ten youthful years of choking down the ghastly pap served at boarding schools. As a result, my life has been a search for soul food that would, presumably, blot out the trauma of those indigestible years.

From this world-wide and lifelong pursuit of good food has come the personal conviction that all cooking should be *au naturel*. The ideal route to good eating is clearly marked by crackling wood fires, glowing charcoal, open pits and red hot stones. The manifold conveniences of electricity and gas do not, in my opinion, make up for how seriously they debauch the food.

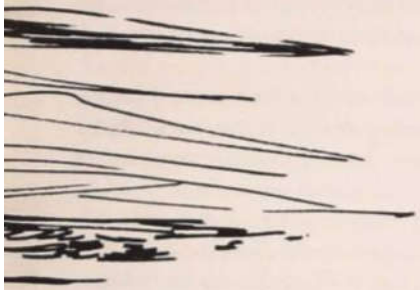
Well, perhaps I'm a little too dogmatic on this point, but any trout fisherman can testify to the notion of how locale, and the method of cooking, gives that extra something to the food as he watches his catch hissing over an open fire at streamside. But that, I claim, is only an *entrée*.

You are in a Newfoundland dory thirty miles offshore. Feel your stomach quiver as it accompanies the rocking of the boat. It is summer but the wind is coming directly off the Labrador Current. You huddle in the bow and watch as I light an open wood fire of birch and fir chips on a metal plate at the stern. I scoop a potful of water out of the Atlantic and set it on the fire. I peel and chop half a dozen potatoes and an equal number of onions and put them in the pot. With one hand I throw a dozen chunks of thick salt pork into the embers at the edge of the fire; with the other hand, I lower a weighted hook over the side and jerk up a five-pound cod. I transform the fish into filleted chunks and throw them into the pot. From the head I excise the "tongue," which is really a chunk of flesh lying between the two bones of the bottom jaw. I toss the tongue into a small frypan with a dash of butter and fry it for about twenty seconds on each side. I share it with you, and you agree that the flavour is delicate, unique, indescribable.

Now, I pull the spitting pork fat pieces out of the fire and throw them into the pot. I skewer the liver with a fork, dunk it in the Atlantic, then plunge it into the blazing wood chips. In a moment, its oily flavour and unpleasant texture have been transformed by the searing heat into a dish not unlike fresh sturgeon eggs.

Finally, the main course is ready; a steaming conglomeration of broken-up potatoes, floating onions, chunks of codfish which have been baptized by the other

Among Franklin Russell's books on nature are "Argen, the Gull" and "Watchers at the Pond".



BY FRANKLIN RUSSELL

ingredients and rendered regal in the process. Your queasy stomach is forgotten. You come to the stern and eat with me. And we both know that the same meal would never taste the same on land.

My eager stomach has led me to exotic cuisine the way a middle-aged eye wanders toward bikinis. I never worried about skin-diving in shark-infested Australian waters because at the bottom of the dive there might be an oyster six inches long that I could dunk in vinegar and spices when I reached land.

Scarcely less alluring is the giant scallop which is common in eastern Canadian waters. By the time it reaches your table, there's nothing left except that miserable little shell-closing muscle. I regret to report that the best part of a scallop—and that's everything *except* the muscle—has either been thrown away or eaten by scallop connoisseurs. Two whole scallops make a satisfying meal.

Precisely the reverse is true of the lobster. While the rest of the world is laboriously cracking claws and hollow legs, the true lobster gourmet breaks open the body and sucks out the juices in the centre and throws everything else away.

Once, in Italy, I steeled myself to plunge a knife down into a plate of *ortolani*. The waiter said they were larks but their claws told me they were sparrow-sized songbirds called corn buntings. I felt like a man eating a plate of canary, but the experience prepared me, albeit reluctantly, for another songbird blowout, this time in the Gaspé Peninsula of Québec where snow buntings (of the same family as those European birds) were a delicacy.

The trouble with my sort of appetite is that it can lead to decadence where the Blue Plate Specials are candied ants and fried grasshoppers and pickled sharks' stomachs. I have sternly resisted these temptations but I must confess to a flicker of interest in the elder Alexandre Dumas' recipe for elephant's feet since it is the reverse of the lobster procedure. The author of *The Three Musketeers* says it is not necessary to eat the entire elephant; you merely cook the feet and throw the rest of the elephant away.

I may be squeamish about eating songbirds but I've never felt fastidious about gamebirds. The willow ptarmigan, common in Newfoundland and in the subarctic, is cooked much the same way as pheasant, but it has a more delicate flavour. Most of the shore birds of America are edible, unfortunately, since so many of them were shot almost to oblivion by the beginning of this century, particularly the golden plovers, various curlews, sandpipers, knots, and oystercatchers. Today, it is not considered sporting to eat them here, and the shorebird gourmet must feast in Europe where the bird-watchers are outnumbered by the epicures.

I have eaten gulls* in various forms, but it is a chancy business since much depends on what the bird has been eating. A herring gull surfeited with sardines tastes awful,

*A word of caution to the reader: gulls and many migratory birds, as well as caribou, are protected in Canada. - *Editor*

but if you catch one and feed it on calves' livers for a month or so, it tastes divine. Their Lordships of Her Majesty's Star Chamber often dined on gulls which then cost one dollar apiece, a fantastic price in 1590.

All shorebird or seabird dining, however, is commonplace compared with a feast of mutton-birds. These birds are possibly New Zealand's only contribution to the titillation of the jaded gastronome. A mutton-bird is a young and very fat shearwater (a relative of the albatross) which is just about to leave its burrow. After a complex series of cooking processes to neutralize the oil in the bird's body, it emerges as tender as chicken and tastes like the finest duck with a faint suggestion of the flavour of a good bouillabaisse. I have eaten adult shearwaters at the other end of the earth, in Newfoundland, where fishermen catch them on fish hooks, and they taste pretty good there too.

There are cherished moments in the lives of all eager eaters. As a youngster, I travelled on a small coastal steamer from Penang in Malaya to Rangoon in Burma. The ship's cook, a Chinese-Malay who loved children, invited me into his steaming galley amidships. On the wood-burning range was a great pot bubbling with reddish liquid.

"You try," he said.

A spoonful, introduced cautiously, was brimstone. It seared my mouth, destroying all taste buds, all feeling. "Aaaagh!"

"You wait, you wait," the Chinese-Malay cook said.

In a moment, the miracle happened. Flavours grew mysteriously in my mouth, chasing themselves back and forth. I ate three bowls of that stuff and I can still taste it, thirty years later. As an adult, I frequently ate the same soup while wandering around the old Dutch East Indies and Southeast Asia—where it is known as mulligatawny, curry-based and highly spiced—but never in such a pleasant conjunction of time and place as on the way to Rangoon.

Alas, there is neither time nor the strength of digestion left to pry out the culinary secrets of the world that I have missed, but I have, happily, strong memories to savour when the mood comes upon me.

Reaching back for the most immature memory of all—even earlier than the Rangoon-mulligatawny-trip—I find myself in Shanghai, or was it Hong Kong? No matter. The Chinese restaurant was dim and the meal lasted four hours. Thirty-eight courses were served to the click of busy chopsticks but it was not gluttony. I got up from the table—you may have guessed it—hungry.

An Arab sheep roast is a lulu of an experience for those with weak stomachs. Masses of bare, dirty-nailed hands wrench flesh from the heads of sheep, but I defy anyone to cook mutton better.

Canadian Montagnais Indians, I am told, once cooked and ate bear's head in the Arab fashion, passing it round on a spit for bite or handful—but with an added refinement. They ended the meal by rubbing hot bear grease into their long hair.

You may be able to resist the special lure of an Indian bear feast but their treatment of caribou, when not boiled or roasted, has always struck me as eminently ingenious. Caribou, like most deer, tends to be tough unless it is treated right. The Indians cut the flesh into long thin strips which were smoked and dried over birch twig fires. I've tried caribou handled in this old Indian fashion and about two years after smoking, it had a fine, fragrant, spicy taste which was enhanced by being wrapped in very thin white birch bark.

I'm sorry I've never had a chance to try the *pièce de résistance* of Micmac caribou cooking which demanded a caribou that had been feeding on moss when it was killed. The Indians removed the moss-filled stomach, filled it with fresh blood, and hung it over a slow fire to warm. When fermentation began, the stomach distended and it was skewered to release the gas. A week later, the stomach contents had fired into a solid, brick-coloured mass which, when cooked again, reputedly made an excellent stew.

And what about pit-cooking, the time-honoured Polynesian procedure? When the Maoris (who are Polynesians) arrived in New Zealand in the 12th century, they found a land of no mammals, and for six hundred years they had to pit-cook moas (flightless birds twice the size of an emu). Mercifully, Captain James Cook arrived in

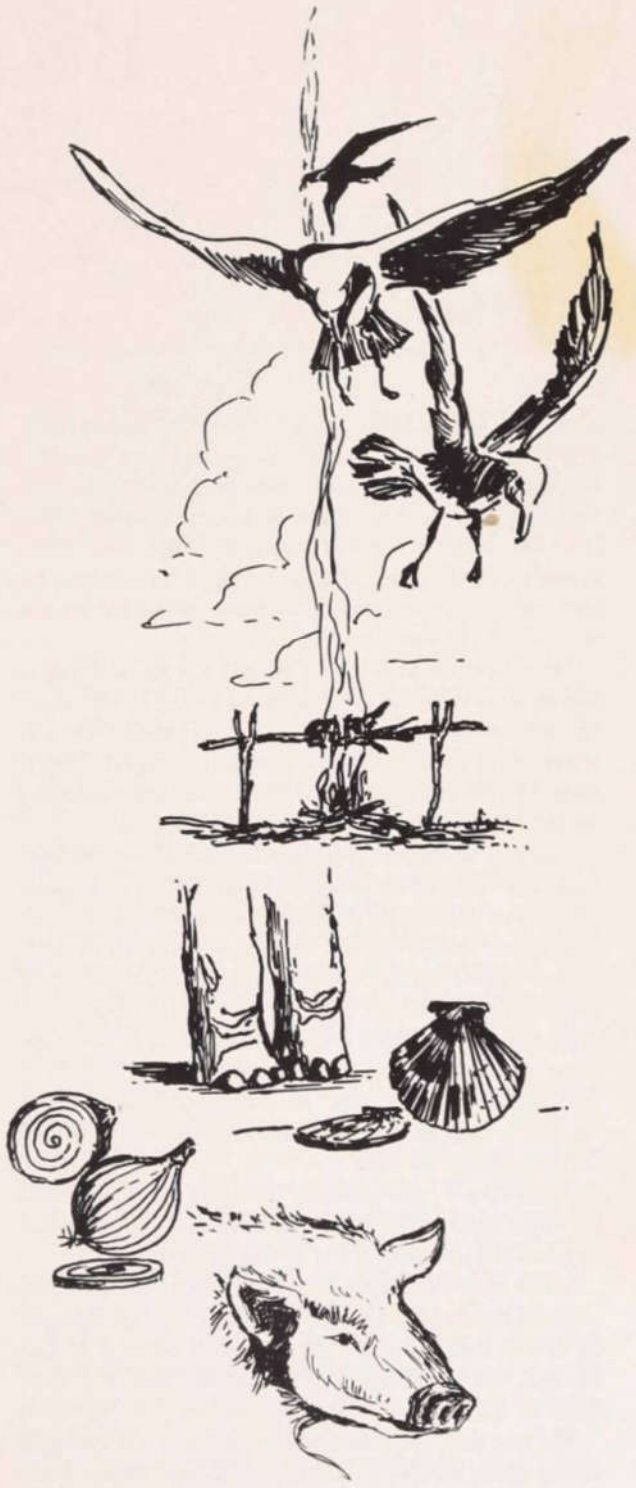
the 18th century and released some pigs, so that the Maoris were able to return to civilized feasting. The pig recipe, by the way, is simple. You need half a dozen small pigs, gutted, a trench about fifteen feet long and four feet deep, lined with red hot stones. Toss in half a truckload of earth, some leaves, then the pigs, more leaves and the rest of the earth to cover the pigs, and then sit around drinking beer for four hours. When you dig up the pigs they are steaming with juices and flavours that no other form of cooking can impart. With this recipe, you can feed fifty relatives and everybody else on your street.

I believe the Micmacs and Beothuks of eastern Canada used the same technique (nearly all primitives knew about it) but instead of pit-cooking geese, or young moose, or caribou, they used the technique on salmon. In primeval days there were a thousand salmon for every Indian in Nova Scotia and New Brunswick, and when the salmon came upriver to spawn, the Indians gorged. An old Newfoundland woodsman who claimed he was using a Beothuk method once showed me how to crust a fresh-caught salmon in clay and cook it in this way (it was good beyond description) but unhappily, the only ingredient of his recipe that I now possess is the shovel to dig the pit.

My strong memories include a half-dozen lightly-fried gulls' eggs, touched with wood smoke, a meal that has made me look askance at domestic hens' eggs ever since. A birch-smoked seal's flipper, direct from the ice floes of the central Gulf of St Lawrence, is surely one of the least known of all gourmet delights. I may be blasé about throwing away the uneaten parts of elephants and lobsters, but my heart aches at the thousands of seal carcasses which are skinned and tipped into the Gulf every year. One day, a smart restaurateur will open the world's first chain of seal restaurants and make a million dollars.

Another unknown delight is a type of giant clam found off the shores of Nova Scotia. The flavour may be a little strong for bland-loving palates, but to my taste they are delicious. In addition, they live in colonies numbered in the scores of millions. Perhaps giant clams will be served with the smoked seal, in our hypothetical restaurant of the future, along with accoub, a Syrian thistle deserving of any gastronome's attention, bottled moose (a Newfoundland specialty), pit-roasted armadillo, marinated hump of camel (the best part) and honey-sweet cloudberries.

This sort of eating, I claim, is a hedge against all kinds of insecurities and frustrations, without resort to gluttony. An unusual meal, in an odd place, leads me to paraphrase Sydney Smith: *Fate cannot harm me, I have dined exotically today.*◆



THE BLACK PET

BY MARGERY HINDS

The welfare teacher at Wakeham Bay involved in this incident was Miss Hinds, who spent many years teaching in arctic settlements. She is the author of "Schoolhouse in the Arctic" and "High Arctic Venture" recently published, and she took the photographs shown.

IT WAS FEBRUARY 1962. The sky was clear and the temperature about 30°F. below zero. Jugini and his hunting partner, Markusi, were outside Jugini's house at Wakeham Bay getting ready to go seal-hunting at the floe-edge. Markusi was harnessing the dogs while Jugini attended to the load. Despite the early hour and the intense cold, they had plenty of helpers, mainly the women and children of their families.

They expected to be away at least a week, and Jugini was packing much of the equipment in the kayak which he had already lashed to the long kamutik. When it seemed that nothing had been forgotten, Jugini checked carefully. He was an excellent hunter, and experience had taught him to forget nothing and to pack well.

Rifles, ammunition, harpoon, double-bladed paddle, sleeping-bags, caribou skin mattresses, willow twig under mattresses, primus stove, kettle, pressure lantern, food-box, extra sealskin boots, hand-saw, snow-knife, telescope, a small bag of dog-food and a two-gallon can of kerosene; they were all there.

Markusi, meanwhile, had harnessed most of the dogs, some were his own and some Jugini's.

"What about that one?" he asked, pointing to a big black dog that had stayed close to Jugini while he had been preparing the load.

"Take him," Jugini replied. "I made a pet of him when he was a pup, and he's never forgotten. He's strong, but he's lazy, so put him on one of the shortest lines."

A few moments later, seventeen dogs were straining on their lines and pushing with their hind legs, anxious to be off. But it needed the combined pushing of two hunters and members of their families before a start could be made. Then, with a sudden jerk, off they went.

The fast pace continued to the foot of the hill leading to the plateau, where the bigger children, before going back home, helped push the load to the top.

On, on went the team over the frozen tundra at an average speed of five miles an hour. Frequent dog-team travel over the route had made a fairly good trail, for at this time of year most of the Wakeham Bay Eskimos hunt seals at the floe-edge on the far side of the Wakeham Peninsula which juts into Hudson Strait.

The sun rose in the greenish yellow sky and then seemed to ride along on the horizon. The hunters found the travelling pleasant, despite having to wipe hoar frost from their faces now and again. Most of the time they rode, but sometimes they ran beside the team to ease the strain on the dogs or to restore their own circulation.

After more than four hours, they reached the top of a low ridge of hills overlooking the frozen sea. Only the pressure-ice, like fantastic statuary which glowed pink and yellow in the winter sunshine, indicated where the shore-line ended and the frozen sea began. Nowhere, in all that vast, unbroken immensity of snow and ice, was there a sign of open water. But the hunters knew it was there, just beyond the horizon.

They descended to sea-level, guided the kamutik through the craggy hills of ice which had been pushed up by the tide, and travelled on the sea to an island. Here, when they came to a suitable snowdrift, they stopped to push a snow-knife into the drift to test its quality as building material.

Jugini drew a circle with his snow-knife. Then, he made an east-west line across it. Both men cut snow-blocks, using only the snow on the south side of the line. Jugini used his snow-knife and Markusi the hand-saw. When there were enough blocks to begin building, Markusi continued to saw snow-blocks while Jugini built the igloo.

About an hour later, the new house, which was to be their headquarters during the hunting-trip, was ready

Friends accompany Jugini and Markusi as they leave the village on their ill-fated hunting trip.

for occupation. They arranged their bedding on the snow-bench—the half circle of snow on the north side of the igloo, which was now some three feet above floor level. Then they shared the other chores. While Jugini prepared the evening meal, Markusi attended to the dogs, which included putting out of their way anything they might chew, such as skin lines and the kayak. The kayak belonged to another Eskimo, as neither Jugini nor Markusi possessed one. To keep it of the reach of the dogs, two high piles of snow-blocks were set up as a stand.

It was almost dark when Jugini came out to take a look at the sky for weather signs. Then both men went in to have their meal. They planned to make an early start the next day so as to have all the hours of daylight for hunting, and soon after supper, they settled down for the night.

The following morning, Markusi's right arm and shoulder were so painful with rheumatism, he knew it was impossible for him to use a rifle. He thought that if he stayed warm in his sleeping-bag, he might be able to hunt the next day.

Jugini decided to reconnoitre on his own, and to come back early. Before setting out, he took his telescope to the highest point nearby to scan the sea-ice. In the far distance were some black specks which he knew to be seals. He also noticed that the ice, where the seals were, was a huge slab that was not very firmly attached to the main ice. If the weather should change suddenly, he thought there might be difficulties.

He went back to the igloo to get water for icing the runners of the kamutik, and as Markusi appeared to be sleeping, he did not talk to him.

Soon, the runners were iced, the kayak was lashed to the sled. Paddle, harpoon, rifle, ammunition, telescope and snow-knife were stowed in the kayak and the dogs were harnessed. As a last thought before setting off, Jugini made sure he had his tobacco, cigarette papers and lighter. He planned to come back early, so he took nothing else.

Travelling was easy on the sea, but it was more than an hour before Jugini saw the thin, dark blue streak of water on the horizon between the unclouded sky and the gleaming sea-ice. He rolled a cigarette and, despite the cold, smoked as he travelled. Eventually, he reached the place where the sea ice ends abruptly and the water begins. Many lumps of loose ice jostled together nearby, but Jugini's main thought was seals.

Within range was a bearded seal—*ugjuk*. Jugini shot it, and after retrieving it, he skinned it and cut it up as an expert butcher might do. Before it had time to freeze he had packed it on the kamutik.

Not long afterwards, he saw a common seal within range and got that one, too.

Sled tracks crossing the peninsula. Markusi walked many miles over such rocks and hard snow after Jugini disappeared.

Satisfied with his success, he turned the team towards his camp, thinking that he'd be glad to have a cup of tea. But almost immediately he realized that the ice where he was had broken away from the main ice, and that an adverse wind was rapidly widening the gap between the two sheets.

"*Aijannamat!* — it's one of those things," he muttered, knowing there was nothing he could do except try to find a way to the landfast ice.

He studied his surroundings. The ice he was on could not possibly break up for a long time at this season. Nor could it drift away to sea unless something very peculiar happened to the wind, which Jugini considered unlikely.

From that moment, his only thought was to find a place from which he could reach the landfast ice. It did not once occur to him to take the kayak and abandon the team. He was convinced that it was only a matter of finding a crossing place. Besides, no hunter would think of leaving his dogs unless a situation was really desperate, which Jugini did not consider his to be.

He continued to seek a crossing place until it was too dark to see. So he built a small igloo to shelter in overnight, for there was plenty of hard snow on top of the sea ice. Before he could rest in his igloo, he needed something to put between himself and the snowy floor. He used the raw sealskins, but soon realized they were insufficient. The only possible thing was a dog skin. Much as he regretted it, he killed and skinned a dog. Then, to generate a little warmth inside himself, he ate some frozen seal meat, and to make warmth in his igloo, he brought some of the dogs inside.

"It could be worse," he told himself, after he began to feel a warm glow as a result of eating frozen seal meat. If only the warmth would spread downwards, to his feet! He felt sure they were beginning to freeze. Then he started to doze.

It required great effort to rouse himself, but he knew well enough that sleep would mean freezing to death and, resolutely, he got up, went outside, and walked about. When he came back inside he sat down, took off his boots, and rubbed his feet without removing his duffles. After a little feeling had returned to his toes, he put on his sealskin boots again.

The night seemed interminable, but at last it ended. When it was light enough, Jugini continued to search for a crossing place. All the hours of daylight he sought in vain such a place. So again he made an igloo for the night and was thankful to have plenty of seal meat to save him from starving. Still, he was convinced that if he kept trying, he would be able to get back without abandoning any of the equipment, a considerable part of which did not belong to him.

This second night seemed even longer than the first. The same thoughts persisted: to find a crossing place, to keep his feet from freezing, and to stay awake.

Maybe luck today, he thought, as he removed the snow-block that had served as a door. But when he saw the weather conditions, hope vanished. Fine, dry, pow-

dery snow blowing near ground level reduced visibility to a few yards. Yet, above the ground-drift, during brief intervals when the wind abated, he saw that the sky was clear and the sun shining. So hope revived and the search continued.

He reasoned that the wind might have blown his sheet of ice against the landfast ice so, with the wind behind him, he went to see.

Later on, he heard a buzzing sound. At first he thought it was a buzzing inside his head, but soon he knew it was an aeroplane overhead. It passed directly above him, but he could not see it because of the drifting snow. The plane went away. A short time later it was back again, and just for an instant, in a small gap in the ground-drift, he had a glimpse of it. When he saw how low it was flying, it occurred to him that maybe they were looking for him.

Jugini had been away from home on hunting trips many times, often for a week or two at a time. Thus, until he heard the aircraft overhead for the second time, he had not imagined that a search by air would be made for him. There was nothing he could do to indicate his whereabouts but he was heartened to know they were looking for him.

All day, until visibility became too poor, he kept searching for a crossing place, but at last he had to give up. Then, for the third successive night, he made an igloo on his immense sheet of drifting ice.

The following day weather conditions were a little better. The wind had almost dropped and only a few scurries of snow whirled around. Jugini could see some crags of piled-up ice. He made towards them, certain that at last he would be able to cross to the landfast ice. While he was hidden beneath one of the huge crags of pressure ice, he heard an aircraft flying low overhead. He did not see it until it was quite far away. Then he recognized it as the one he had glimpsed the day before, and he knew for sure they were looking for him.

Soon he was studying his chances of getting across to the main ice. This was by no means as good a place as he had hoped to find, but with a little luck, he thought he might succeed. There were quite big gaps between pieces of ice but the sled was long enough to bridge them.

Jugini took the harpoon and the paddle from the kayak, thinking they might be of help if all did not go well. Next, he decided to sit at the back end of the sled so as to remove pressure from the front, in case it should get caught under pieces of ice. Then, feeling that all precautions had been taken, he urged the dogs forward.

For a while, all went well. There was now only a short distance to the main ice. Jugini's spirits rose. The end of his ordeal was in sight.

Suddenly, everything was in the water—man, sled, and dogs. Jugini was near the kamutik but unable to grab it. The dogs scrambled on to a big lump of loose ice nearby, dragging the loaded kamutik behind them. Jugini, up to his neck in icy water, used the harpoon and the paddle and succeeded in getting on to that ice, too. He dared not stand up lest he slip into the water which separated it from the nearby main ice, but by crawling, he almost caught up with the sled that the dogs were still dragging ahead of him.

He was within a few inches of it when the ice tipped and he was in the water again. He lost the harpoon and the paddle, and for an instant thought he would drown. He could not possibly get to the main ice now, for the dogs with the longest lines were already scrambling on to it, and those with the shortest lines were beyond his reach.

Just then, one of the dogs turned towards Jugini. It was the black pet. He managed to clutch hold of its line, causing those on the main ice to halt abruptly. Almost immediately, they renewed their efforts and thus dragged Jugini to safety. That is if being at the floe-edge wet to the skin in 30° F. below zero and many miles from home can be called safety.

Jugini knew that he had to act quickly to prevent freezing to death. First, shelter—a tiny snowhouse. Next, dry clothes, which meant taking off garments one at a time and wringing out the water. Then, heat of some kind, but how?

Using the heart of the bearded seal as a cup, he squeezed oil from the blubber. Then, making the big rib cage serve as a *kudli* (stone lamp) he put oil into it and tried to light it with his cigarette lighter. The lighter would not function.

After warming it between his legs, eventually there was a flame. It mattered not at all that his queer stove produced plenty of smoke and a horrible smell as well as some heat.

As for his feet, he could not make them warm. So he wrapped them in his only dry garment, his crocheted woollen cap, and sat like a woman, with his feet under him. Still they remained cold and numb. Jugini knew what would be his fate if feeling did not return to his feet, and he thought he would rather be dead than without feet. Then, with great remorse, he killed his driest dog so as to wrap his feet in its skin.

Cramped quarters, smoke and smell of his unusual heater, fatigue and cold, all contributed to making him drowsy. Only by great will-power could he resist the almost insuperable desire to close his eyes and sleep.

Throughout the night, whenever he felt drowsiness overcoming him, he busied himself by squeezing oil from

seal fat, turning the garments that were drying over the stove, or massaging his feet.

By daylight, his clothes were dry enough to prevent their freezing stiff as boards; a little feeling had returned to his feet, and he was still able to walk.

He set off on the thirty-five mile detour to the snow-house which he and Markusi had made so long ago.

No, he remembered. It was only last Thursday when they built that igloo, and today was Tuesday.

Hour after hour, painfully and slowly he pressed on, not daring to stop lest it become impossible to go on again. By night he had reached his former camp.

When he looked around and saw all the comforts he said, "Thank you Markusi!" to his partner who had long since departed—for Markusi had left everything in the igloo. To Jugini, it was indeed a luxury to find sleeping bag, primus stove, kettle, kerosene, tea and food—everything he could wish for.

While he still had the strength, Jugini attended to the dogs and the load on the sled. Then he filled the kettle with snow, lit the primus and set it where he could tend it while lying on the snow-bench in his sleeping bag.

Little did Jugini realize the anxiety of everyone at Wakeham Bay, and the effort that had been made on his behalf from the very moment that his disappearance was known.

When Jugini did not return on the Friday evening, Markusi knew that something was wrong. Next morning, despite increased rheumatic pains and stomach trouble as well, he went to the highest point on the island as soon as there was enough light. Immediately he realized that the ice where Jugini had been hunting had broken away, he set off to Wakeham Bay to get help. It was a journey of twenty-five miles over ice, rocks and snow. At eleven o'clock on the Saturday night he reached the settlement. He told the missionary the same night, but nothing could be done until daylight except make plans.

At that time there were only two white people at Wakeham Bay, the Roman Catholic missionary, and the federal government teacher.

It was Sunday morning before the teacher knew of Jugini's disappearance and by that time, three dog-teams, with two Eskimos to each team, were ready to set off. The missionary and Markusi together had studied a large-scale map of the area, and the direction of the wind in recent days. The routes the teams were to take had been agreed upon. At the end of the day, one team was to return to the settlement with news; the others were to stay in the region to continue the search.

Both the missionary and the teacher had radio transmitters which they used to call pilots of planes known to be in the area to ask them to keep a look-out if they passed the region where Jugini was lost. The missionary called the Chimo mission to pass on information and try to get help. The teacher called the federal district administrator at Chimo. As it was Sunday morning, the

Everyone goes to meet the plane that has landed on the sea ice.

Jugini after he returned from the hospital in July.

calls went on for more than three hours before anyone answered. When the federal administrator heard the news, he contacted his superior in Ottawa immediately, and he in turn called the Royal Canadian Air Force Rescue Service. Within a very short while, an aircraft would be looking for Jugini.

Day after day the search by plane continued until every part of a wide area had been covered in the customary systematic way. The teacher, whose transmitter had the same frequency as the plane's, was able to speak to the air crew, but never was there good news. After every part of the area had been surveyed, some of it twice, the air search was called off.

Those who knew Jugini, that is everyone at Wakeham Bay, had hopes that he was still alive, for it was learnt that there was much tightly packed ice in that region, and Jugini was a skilful hunter. The teams that had been searching came back without a clue. Everything that it was possible to do to find him had been done. All that now remained was hope—and stories of Eskimos who had had similar experiences and who had eventually turned up alive, thanks to their resourcefulness and optimism.

On the Wednesday following Jugini's disappearance, two hunters from Wakeham Bay intended hunting seals in the region where Jugini and Markusi had been. It was suggested that they use the igloo where those two had camped and hunt from there on the chance of picking up a clue.

"And if, by any wonderful chance, you find Jugini," they were told, "come back at once. A plane from Asbestos Hill is expected here about noon to gas-up and Jugini is sure to need hospital care."

When Jugini awoke on the Wednesday morning he knew his feet were in serious condition. He was afraid to look at them as he thought they were already rotten. He knew that he could not travel. But he had not come to the end of his resourcefulness.

He tore a piece of paper from the packet of tea and wrote a letter to his wife, in Eskimo syllabic script, for like many Eskimos he had a stub of pencil in his pocket. Then he emptied the sugar from its plastic container and put the letter in it. He was just about to struggle out of the igloo to tie the letter to a dog and send all the dogs home, when he heard a commotion outside.

Imagine his joy when two of his friends from Wakeham Bay walked into the igloo. Imagine, too, their astonishment at finding him there.

"You must have started last night," Jugini told them.

"We did," they replied. "It wasn't very dark and we want to hunt all the hours of daylight. But now that is changed." And they told him about the plane that would come at noon.

One of the newcomers went straight back to Wakeham Bay with his own team to tell the news. The other hitched up Jugini's dogs, arranged the sled like a bed, put Jugini on it and set off as soon as he possibly could.

Exactly fifteen minutes before the Norseman plane landed on the frozen sea at Wakeham Bay, Jugini reached the village. He was taken to the Fort Chimo Nursing Station where Nurse Joe Ross prepared him for removal to hospital at Roberval.

The only part of his feet that Jugini lost were his toe nails, and of course he grew new ones. When he returned to Wakeham Bay on July 6th he said his feet were as good as ever, though they were still rather weak at that time.

He thought the most remarkable part of his experience was that the black pet turned back at the very moment when death by drowning was imminent. ◆

NORTHERN BOOKS

FIREARMS, TRAPS AND TOOLS OF THE MOUNTAIN MEN

By Carl P. Russell. Alfred A. Knopf, New York, 1967. 474 pp., 108 figs. $12.50

Reviewed by Kenneth E. Kidd

Many readers of the Beaver already know Dr Russell's earlier books; *One Hundred Years in Yosemite*, and *Guns on the Early Frontiers*. The present volume rounds out his publications concerning the equipment of the fur traders and fills a long-felt gap.

The late Dr Russell was associated for well over 40 years with the U.S. National Park Service, most of which time was devoted to conservation work and the developement of museums and displays. In the course of these duties he developed a profound interest in the more practical aspects of the fur trade; that is to say, in the tools and equipment which traders and trappers used, how these were made, where they were made, the way in which they can be distinguished one from another, the prices they cost and, perhaps most importantly, what can be learned from them concerning the past. In all of these matters, Russell speaks with authority, and he has carried out extensive museum and library research to back up his field knowledge.

Although the title suggests that the book deals only with the equipment of the mountain men—of whom there were few, if any, in Canada at least in the usual sense of that term—its coverage is far greater, and applies equally well to fur trading in most parts of North America, beginning with early French and English materials. Within this format, Russell discusses traps and trapping, firearms, knives, axes (all of which were "the tools of the trade"), and miscellaneous ironware, much of which was small but quite essential, like awls, knitting needles, and arrowpoints for the Indians.

Russell's research throws new light on many aspects of the material culture of the fur trade, which have hitherto been rather baffling. Iron axes are a case in point. The author traces them back to La Têne times in western Europe and claims that those in use up to the middle or end of the 18th century in America remained essentially the same. The conditions of forest work here, however, demanded technical improvements, resulting in the modern American axe with which most of us are familiar. The author carefully describes the manufacture of these works and other pertinent matters, and if there is a fault, it is that in this case he fails to provide us with specific details concerning the Biscayne industry, which he says produced many of those which reached the continent in the early days. Also, some important collections are not mentioned.

This book will certainly be welcomed by all those interested in the history of the North-west, the fur trade, Indian life, the history of tools and in museum work. It is, moreover, attractively produced with many helpful illustrations, a bibliography, and an index.

Professor Kidd is Chairman of the Department of Anthropology at Trent University.

ESKIMO ADMINISTRATION: V ANALYSIS AND REFLECTIONS

By Diamond Jenness. Arctic Institute of North America, Montreal, 1968. Technical Paper No. 21. 72 pages. Members $3.00; non-members $4.00.

Reviewed by Douglas Leechman

With the appearance of "Analysis and Reflections", the last section of Jenness's quintet is at last before us. It is a worthy terminus to its four predecessors, completing what is certainly the most important study of "Eskimo Administration" ever undertaken, and a model for future students of native races caught up in the maelstrom of modern progress, a "progress" that will not necessarily lead us to a desirable end or the resolution of all our difficulties.

The book begins with a parable which, like most parables, has a certain obscurity about it and a variety of possible interpretations. This is followed by a critical review of what has been presented in the first four sections of the work, showing us that Denmark has made the best of a difficult problem, that Newfoundland has done almost equally well in the Labrador, and that the United States and Canada have to face the fact that they have not had nearly as much success, and that stupendous problems still confront them, problems growing larger and more difficult year by year.

The sketches of the present situation in Greenland and the Labrador are excellent; the fact that there are legally no "Eskimos" in the Labrador is both amusing and gratifying, a good example of the fact that there are at least a few problems which go away if you ignore them. The situation in Canada, however, is painted in sombre colours indeed, as is that in Alaska.

There is probably nobody who knows more about the Eskimo problem than Jenness does and nobody who has given it such careful consideration. Any suggestions or recommendations he may make should, therefore, be studied most carefully by those in authority. He presents eight concrete, definite suggestions, with appropriate comments on them, and these form the most essential part of his study. Will they ever be adopted? Will any single one of them ever be adopted? Will any man sitting in the high places of the administration read them and think about them? Who knows?

Too much praise can defeat its own end, so we must chide the author for getting the name of the Hudson's Bay Company wrong (p. 8). He, of all people! But we do thank him for the indispensable index, which covers all five parts. We all thank him for a learned, far-seeing study, an outstanding contribution to applied anthropology, an apologia *pro vita sua*.

Dr Leechman, author and lexicographer, was formerly anthropologist at the National Museum of Canada.

NORTH-WEST OF SIXTEEN

By J. G. MacGregor. M. G. Hurtig Ltd., Edmonton, 1967. 224 pages $4.95

Reviewed by Hartwell Bowsfield

When *North-West Of Sixteen* was first published in 1958 it was critically acclaimed in all parts of Canada. Suffice it to say that the interval of ten years has not tarnished a word or a paragraph of this admirable work of historical and creative writing. Be-

fore 1958, J. G. MacGregor, in a number of studies, had exhibited his passionate interest in the history of the Canadian west, and in 1966 gave us his notable biography of Peter Fidler. None of his work, however, can equal either in narrative style or spirit *North-West Of Sixteen* which, it soon becomes apparent to the reader, is a captivating combination of tribute and nostalgia.

The book is one of reflections, of MacGregor's memory of his own and his parents' experiences on a bush homestead sixty miles northwest of Edmonton from 1906 to the end of the first World War. In this aspect it is local history—and good local history, not the usual variety of vacuum history in which homesteaders are set down in a particular location without reference to the broader picture of immigration and the settlement of the west. The reader is always conscious that the MacGregor family is part of a great westward movement of peoples from Europe, eastern Canada and the United States to one of the last agricultural frontiers on the North American continent. In its setting, content and treatment *North-West Of Sixteen* is local history at its best.

Yet local history is neither the purpose not the major ingredient of the work. The book, perhaps, should not be called history at all in the formal sense of that word. Though the story of the development of a community through a specified period of time is present it is only as a secondary element of the writing. This development is merely an incidental background against which MacGregor projects the events of his family's life in the New World environment. These events, his re-creation of the homestead atmosphere, and the physical environment dominate the historical content. His purpose, and his achievement, is to present the flavour and the spirit of homestead life as well as the never-ending change of colours and sounds of nature. This constitutes the nature of his work.

Here is the bitter cold of a winter in a log shack; loneliness and fear in an isolated country; the thrill of new life in the spring, the honking of geese and the appearance of flowers; the sounds of the whisky-jack and the scampering of squirrels; the terror of a bush fire; a visit to a livery stable and a Chinese restaurant, stubbed toes, and onion sandwiches for school lunch. It is building a spruce fence, threshing, and visits of fervent preachers and thundering Bible-punchers. It is a young boy's first suit, his preparation for the school concert, and Christmas on the farm.

To MacGregor, regretfully, these are things that are past, far-away times never to be recovered, days which were changed as homesteads became farms and the young men went off to war. Here is history of a sort, and certainly social history, but above all a mood skilfully created with warmth and humour and told in a style both vivid and moving. This is MacGregor's tribute not only to his parents but to all homesteaders and, as was said when it first appeared, it is a gem.

Mr Bowsfield, former Manitoba Archivist has since been instructor in history at York University.

THE VALLEY COMES OF AGE

By Stanley Norman Murray. North Dakota Institute for Regional Studies, North Dakota State University, Fargo, N.D. 1967. 250 pages, illus. $7.50.

Reviewed by J. H. Ellis

In this work the author presents an interpretation of a history of agriculture, from 1812 to 1920, in the so-called "Valley of the Red River of the North", or more properly the territory occupied by the Central Lacustrine Plain of Glacial Lake Agassiz in the states of North Dakota and Minnesota, and the Province of Manitoba.

From a bibliography of over 250 publications, supplemented by government reports and historic documents, together with the knowledge acquired as a native son of North Dakota, the author has arranged his presentation in a volume of three parts.

Part one deals with the geography and history of the territory involved, and the change from fur trading to agriculture that took place from 1812 to 1870 in the Red River Settlement.

Part two deals with agriculture in the upper and lower portions of the territory during the period 1870 to 1885, and outlines the development of railways and early expansion of settlement in the Canadian portion which followed the coming of the railways; the pattern and nature of farming; and the expansion of commercial farming with emphasis on "Bonanza grain farms" in North Dakota.

Part three deals with the period after 1885 during which the author undertakes to show that, although farming in the territory involved was slow to mature, the "Valley of the Red River of the North" was not only the gateway to the northern plains but that it served as an international arena for diversification and improvement of northern agriculture and influenced the development of an area far larger than itself.

The author's approach to the subject is to be commended and all interested in the subject matter may read this presentation with interest and profit, although many will not agree with some of the interpretations placed on information from Canadian sources, or on all conclusions drawn from the works of historians of other days.

The work appears to have suffered from too hasty publication and too little time spent in checking accuracy and clarity of references. Grant MacEwan, for instance, may be surprised in the different and varying number of initials in his name; and the Cabinet of the Province of Manitoba is not likely to appreciate being referred to as the Governor's Council instead of as the Lieutenant-Governor-in-Council.

Professor Ellis, who started the experimental farm at the University of Manitoba some decades ago, is currently working on a book on the history and development of agriculture in Manitoba.

FINLAY'S RIVER

By R.M. Patterson, Macmillan of Canada, Toronto, 1968, 315 pages, bibliog., maps, photographs, $7.50.

Reviewed by Patricia M. Johnson

The Finlay River forms a part of the Rocky Mountain Trench in north-central British Columbia which is soon to be flooded from the Peace River Dam. So at this very appropriate time, R. M. Patterson has produced his latest book, *Finlay's River*, "a vivid account of a wild and beautiful river in British Columbia and the men who have explored it".

In 1949 Mr Patterson, accompanied by his son, made a canoe trip up the first part of the river. He started from Summit Lake, near Prince George, and from that moment was across the divide leading to the north for the water eventually runs into the Mackenzie River instead of out to the west coast or to the south. Leaving Summit Lake, he and his son meandered down the Crooked River with its water lilies and low bushes until he came to McLeod Lake and the old Hudson's Bay Fort there. A short trip down the Pack River

brought them to the Parsnip, and it is the junction of the Parsnip and the Finlay that forms the mighty Peace River.

Four miles up the Finlay River, towed by Roy McDougall, the Pattersons came to McDougall's post now called Finlay Forks, and this was the first stage of their journey. From there, they and their belongings travelled upstream in a powered river boat as far as Fort Ware. They had to traverse the great driftwood pile known as the Picket Fence. They went past Fort Grahame abandoned two months previously after sixty years as a Hudson's Bay Company Post. Then they made the dangerous trip past the rocky cliffs known as the Deserter's Canyon.

After three days near Fort Ware, Alan Patterson returned home by plane, and his father was left to explore by canoe the upper reaches of the river and some of its tributaries.

He calls the book "a Finlay River anthology based on my own journey through the Finlay country" and, as he goes, he relates the adventures of those who have made the journey before him. These journeys end in 1916 as the coming of outboard motors completely altered the style of travel and replaced the birch-bark and cottonwood canoes with powered river boats.

Patterson's account of his own journey makes fascinating reading and he is certainly a master of travel in dangerous waters. Yet he finds time to visit the fishing lakes, to describe the countryside, and at the end of a day to record, "Bathed, baked bannock, good supper, bed, Thank God".

As he makes each stage of his journey he describes the records of former travellers. First there was Samuel Black, sent out by the Hudson's Bay Company in 1824 and the only man to follow the river to its source at Thutadé, although the river was named for John Finlay who had gone a very short way up the river probably in 1797. In 1873 came Captain W. F. Butler who side-tracked to Germansen and the Omineca gold fields. Next came A. R. C. Selwyn of the Geological Survey of Canada accompanied by the famous botanist John Macoun, and in 1893 R. G. McConnell who came to observe the geology of the Omineca region. In 1897, the North West Mounted Police started a trail from the Peace River to the Yukon, but this was finally abandoned. Perhaps the most interesting material comes from the survey notes of F. C. Swannell, a B.C. land surveyor and his assistant George Copley, not forgetting the accounts of the Chinese cook, Nep Yuen. They spent 1913 and 1914 in the area and record it in great detail.

The historical accounts of these early explorers are fascinating but their arrangement is confusing. As Patterson traverses one part of the river, he brings in all the historical accounts of that area. Then he continues with his own journey and brings in the old records again. This goes on throughout the book, and the reader is never quite sure how far each of the explorers gets in his own particular journey.

Four years ago, this reviewer stood at the Forestry lookout high above McLeod Lake and got for probably the last time a bird's eye view of the Rocky Mountain Trench. Mr Patterson has described the Finlay River piecemeal, in his own inimitable style. He has done it just in time, for the flooding of the area will remove a glorious stretch of country and the host of historical sites that go along with it.

Miss Johnson is a teacher on Vancouver Island who travels widely in British Columbia and is keenly interested in the history of the northwest.

ESKIMO ART

This popular presentation of many aspects of Eskimo carving, old and recent, pottery, painting, masks, with a selected bibliography, which was a special issue of The Beaver in 1967, has now been reprinted. 100 pages of text and pictures.

$1.50 from

The Beaver, Hudson's Bay House Winnipeg 1, Manitoba

MOODS OF THE COLUMBIA

By Archie Satterfield. Superior Publishing Company, Seattle, 1968. 64 pages, photographs. $18.50

Big and beautiful photographs are the feature of this book There are 56 of them, four in colour, and they are well displayed on pages about 13½ by 13 inches. (This means that the book will not fit in any shelf.) Nine photographers are represented and their studies, made along the course of the mighty river, range from mountain to desert, from log-rafts to salmon (live and dead) and ocean breakers. Humans are unimportant though one group of pictures depicts, rather inadequately "Men of the River." There is no attempt to follow the course of the river and its 450 miles in Canada are represented by Mount Columbia and Revelstoke. The view of the Columbia icefield is somewhat misleadingly entitled "Birth of a River" with the implication that this is the source rather than Columbia Lake considerably farther south.

The compiler of the book is a photojournalist and besides assembling the photos he has added a Klickitat legend, and some words here and there on a few pages, which break into the sequence rather oddly. He also includes short biographies of the photographers.

Anyone with an eye for scenic effect will enjoy browsing through this collection of first-rate photographs in which, strangely enough, the monochromes are more effective than the colour reproductions.—*M.B.*

COMMUNITY DEVELOPMENT IN CANADA

By Antony John Lloyd. Canadian Research Centre for Anthropology, Ottawa, 1967. 98 pages, bibliog. $2.00.

Reviewed by Douglas Leechman

We have in Canada a number of communities whose members are at a disadvantage both socially and economically. Prominent among such communities are Indian reserves, the Eskimo groups of the Arctic, the Metis of the prairies and the northwest, and some Negro enclaves, principally in the east.

By community development, one gathers from a reading of this booklet, is understood an attempt to develop the natural resources of such communities to the best advantage, the introduction of new factors intended to improve the present condition, and the provision of better schools, hospitals, and welfare services.

The work already undertaken by federal, provincial, and municipal organizations is surveyed and its effectiveness estimated, and suggestions are made for future undertakings and the extension and maintenance of present programs. It is a useful survey and gives one a clear idea of the present situation. There is a good bibliography and a list of people and organizations involved in such development programs with their addresses, a very useful and necessary publication.

"We look confidently to you for the solution of...the final problem in the geography of the northern hemisphere."

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to John Rae,
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